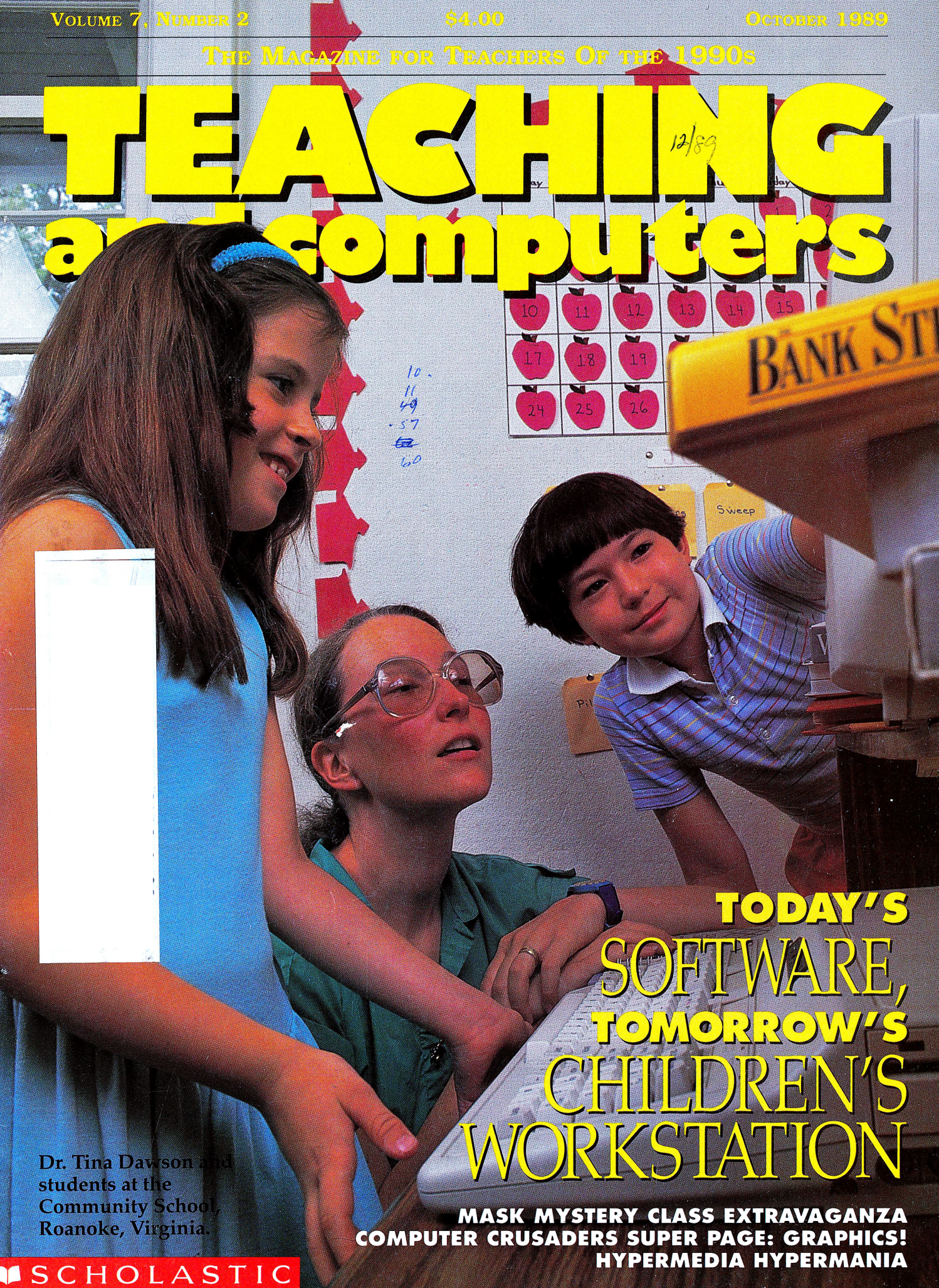
VOLUME 7, NUMBER 2 $4.00 OCTOBER 1989

THE MAGAZINE FOR TEACHERS OF THE 1990s

TEACHING and computers



TODAY'S SOFTWARE, TOMORROW'S CHILDREN'S WORKSTATION

Dr. Tina Dawson and students at the Community School, Roanoke, Virginia.

MASK MYSTERY CLASS EXTRAVAGANZA
COMPUTER CRUSADERS SUPER PAGE: GRAPHICS!
HYPERMEDIA HYPERMANIA

SCHOLASTIC

Finally, a computer for computer experts for their

Introducing the revolutionary HeadStart® Explorer, the first computer that satisfies all your needs. Plus the need to save you money.

The HeadStart Explorer Puts YOU In Command.

Explorer's revolutionary new features and unique program design provide you with an ultra-friendly operating environment which allows you to immediately begin enjoying all the benefits of a personal computer…even if you've never touched one before!

From the moment you plug it in, the Explorer lets YOU be in control.

Flip the "ON" switch and the menu immediately appears.

Instead of confusing words or computer phrases, simple on-screen graphics allow you to choose the file you want to work on, and you won't have to memorize complicated commands.

Now everyone in the family can become a computer expert.

The HeadStart Explorer Packs Extraordinary Muscle, Memory And Speed In One Small Compact Size.

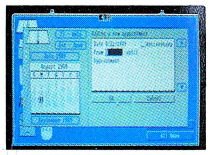
With an 8088-1 micro processor operating at a fast "turbo" 10 Mhz, plus having a 512K memory (that's easily expandable to 768K), the Explorer has it all.

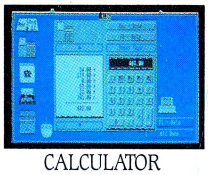
Fully IBM compatible, the Explorer features built-in DOS, applications and a clock/calendar in its system.

HeadStart Technologies has also put all of the peripheral support inside the Explorer to allow for its sleek design and easy storage and convenience.

"Instant-On" Application Animated Graphics.

INSTANT-ON MENU


APPOINTMENT BOOK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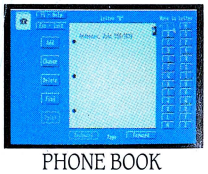
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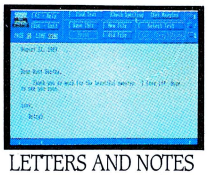
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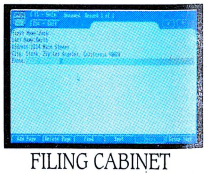
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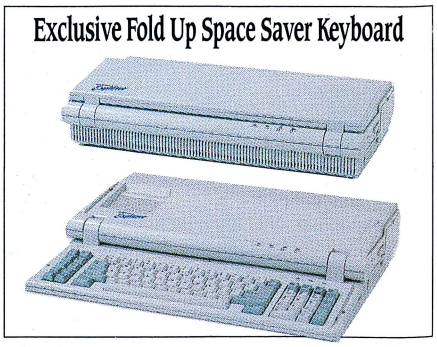
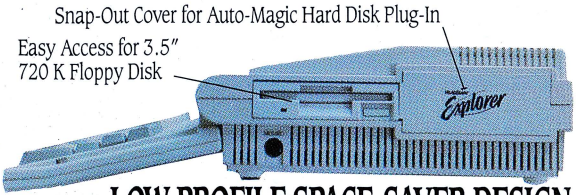
Exclusive Fold Up Space Saver Keyboard



Snap-Out Cover for Auto-Magic Hard Disk Plug-In

Easy Access for 3.5" 720 K Floppy Disk



LOW PROFILE SPACE-SAVER DESIGN

advanced enough and simple enough parents.

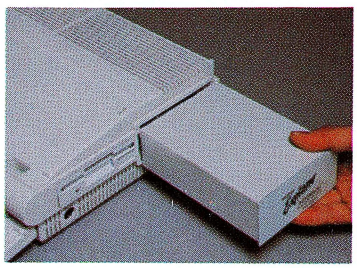
The HeadStart Explorer Is Ready To Grow With You.

Now you can add to the system when you need to.

There are built-in parallel and serial ports for a printer and modem, plus a mouse port, game port, monitor port and an external floppy disk that can be attached immediately.

The hard drive, RAM expansion and even an additional peripheral card can be added without opening the computer.

There is no XT personal computer that is more expandable.



ADDING A HARD DISK DRIVE IS JUST A SNAP! Simply plug in the AUTO MAGIC℠ 40 MB Hard Disk Drive cartridge (optional),

PLUG-IN 256K RAM Pac™ HeadStart RAM PAC expands your RAM memory from 512K to 768K (640K to DOS, 128K to printer buffer.)

The HeadStart Explorer Even Comes With A Coach.

HeadStart is so committed to the idea of simple, easy, trouble-free computing, we even give you your own computer coach.

Just call the special toll-free number we give you when you buy a HeadStart, and your PC coach will answer any and all questions that may come up.

Affordable And Compatible With The Whole Family.

The HeadStart Explorer is perfect for education, Mom's household planning, and Dad's home office and business.

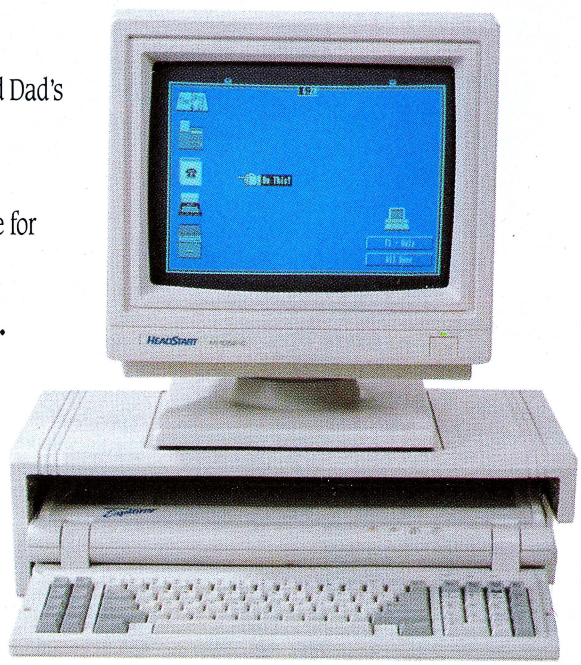
So now that the right computer has arrived, why not come in and buy one.

The complete system with CPU and color monitor retails for only $949.

HeadStart also offers all the peripherals at a very affordable price, like the mouse for only $29.95.

The HeadStart Explorer...a great system at a great price.

For the HeadStart Explorer dealer nearest you, call toll free: **800-882-1888.**



HEADSTART® Explorer

Built To Be Compatible With You.

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CIRCLE 1 ON READER SERVICE CARD

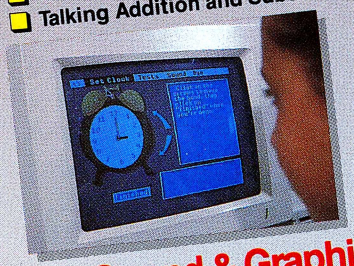
IT'S HERE NOW!

A New Generation of Talking Software that Captures the Full Power of the Apple® IIGS...

Imagine a "Talking Schoolhouse"

inside your GS computer – software that uses perfect human voice and the most stunning graphics imaginable to teach basic skills to youngsters. Why fantasize? . . It's here now and it's known as the TALKING SCHOOLHOUSE™ SERIES from Orange Cherry Software. 14 software programs captivate children ages 3-9 as they explore basic concepts on their own:

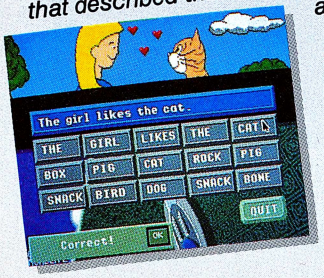
- Talking Animals
- Talking Dinosaurs
- Talking Numbers
- Talking First Writer
- Talking First Reader
- Talking School Bus
- Talking Alpha Chimp
- Talking Colors and Shapes
- Talking Reading Railroad
- Talking Addition and Subtraction
- Talking ABC's
- Talking Speller
- Talking Clock
- Talking Money



NO SPEECH BOARD OR ANY ADDITIONAL HARDWARE IS REQUIRED . . . ONLY THE STANDARD 512k APPLE IIGS COMPUTER.

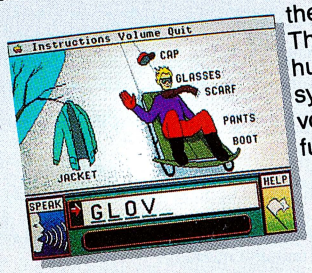
Super Sound & Graphics

See why children, teachers, and parents have been amazed & delighted by our super sound & graphics. One teacher writes: *"In Talking First Writer, we put in a sentence, the computer read it out loud, and then instantly produced a brilliant, colorful picture that described the sentence. We were astonished!"*



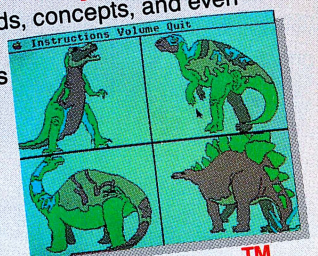
Perfect Human Voice

This software brings the friendly and reassuring voice of a real person into the computer learning environment. No speech board is required because we utilize the GS's built-in Ensoniq™ sound chip. Developers working with proven educational concepts have recorded actual human voice & electronically digitized the sound into the computer program. The result is perfect human speech - not a synthesized computer voice that only confuses youngsters.



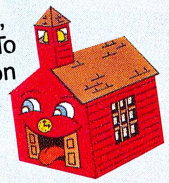
Super Hi-Res Graphics

Letters, numbers, words, concepts, and even dinosaurs come alive in thousands of colors with our super high resolution graphics. These programs let the GS computer perform at its maximum level.



The Talking Schoolhouse™ Series

from Orange Cherry Software. All programs are currently available on 3.5" disks for the Apple IIGS. The suggested retail price is $49, $59 for the School Edition. To order, or for more information contact your dealer or call toll-free (800) 672-6002.



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TEACHING and computers

VOLUME 7, NUMBER 2 OCTOBER 1989

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PLUS: Added Attractions

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FROM THE EDITOR

A Look Inside T&C

Making the Most of Today While Imagining Tomorrow

Of all the challenges that computer-using teachers face, perhaps the toughest (and most exciting!) is the dual task of making the very most out of what is currently available while simultaneously looking ahead to the possible and the ideal. It's equivalent to patting your head and rubbing your stomach at the same time: tricky, but certainly do-able with a little practice.

That's what this issue's cover story is all about. As she remembers it, educational technology expert Barbara Kurshan had been asked by a software company to propose a list of ideal features for a future tool software package for kids. Before she could construct such a list, though, Barbara felt as if she should have a thorough overview of the products currently "out there" on the educational technology market. So she and co-authors Beverly Hunter and Suzanne Bazak conducted an exhuastive review of almost 50 popular elementary tool packages, observed them in use by kids, and then came up with the tool-by-tool "shopping list" of features that appears in "Today's Software, Tomorrow's Children's Workstation" on page 20. (You might be heartened to find so many ideal features available—if only in pieces—in the software you already use everyday!)

Like so many of our reader-contributors, Janneke Bogyo is expert at getting the maximum use out of the hardware and software she already has on hand. As computer lab director at a school on the Tuscarora Indian Reservation in Upstate New York, Janneke created this issue's class project feature on masks using standard-issue graphics, word processing, and data base software. What makes the project special is the creative approach Janneke takes to guiding students through the process of learning about other cultures and then sharing what they've learned. "The Mystery of the Mask" (page 28) is a sure bet for Halloween, but it will fit in anytime your class is ready for a hands-on multicultural experience.

You'll find multicultural perspectives of another kind in this issue's "Classroom Happenings" (page 10). Every couple of months, associate editor Louise Orlando receives a flurry of airmail envelopes bearing colorful stamps and exotic postmarks: news from our readers overseas! As you'll see from these "international" Class Happs, teachers in such remote locales as Indonesia and Saudi Arabia are particularly adept at aiming high while making the most of what's on hand.

For our "Computer Crusaders" Super Page this issue, writer Janice Sork wasn't content just to provide the facts about computer graphics. At Janice's school in Beaverton, Ore., teachers and students alike are concerned about such issues as vandalism and the rights of the disabled. So Janice created her Computer Crusdaers to fit: super heroine Fontasia sends vandals scurrying with a flick of her computer mouse tail, while her sidekick Invinceagraphic has transformed his ability to speak only in rebuses into a strength rather than a weakness. Janice's lively integration of graphics tools, curriculum objectives, social concerns, and just plain fun exemplifies the special kind of vision that computer-using teachers possess.

At *Teaching and Computers,* we are fortunate to have on board our own practical visionaries. The latest addition to our staff certainly fits that description: Therese Mageau brings to the associate editor/software position a unique blend of experience and enthusiasm. For the past three years, Therese has worked at Sunburst Communications as a writer, editor, and project manager. Her most recent duties at Sunburst involved development of a new 17-module science curriculum, for which Therese screened software and videotapes, edited curriculum manuscripts, and wrote teacher support materials. But in addition to her extensive hands-on experience with educational technology, Therese also has a long history as a creative writer and teacher of writing. Her breadth of perspective can only help keep *T&C*'s eyes on the "big picture" even while we maintain our grip on the everyday detailed reality of computing classrooms—like yours!

M. Revenaugh

TEACHING and computers

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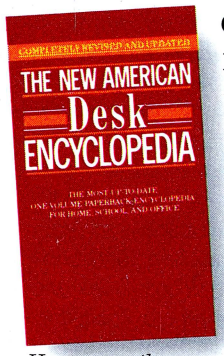
CARMEN DOES TIME.

She's devious, elusive, and really knows her history.

Carmen Sandiego. The mastermind that your students have pursued to the ends of the earth.

Now Carmen and her gang have escaped to a completely different dimension: Time.



How many other educational programs actually come with an encyclopedia?

Our brand new *Where in Time is Carmen Sandiego?*™ takes the award-winning format of Brøderbund's acclaimed geography series and changes the course of history.

To catch Carmen, your students must rely on their sharp wits. And on clues that point to any time period between A.D. 400 and 1950—Incan Peru, Renaissance Italy, ancient Japan, colonial India, the Roman Empire, medieval Europe and lots more.

To help in the detective work, we've included the 1300-page *New American Desk Encyclopedia* for tracking down clues and honing research skills. There's also an on-screen device called the Chronoskimmer for travelling through time.

Along the way, students encounter famous people, legendary events, and scientific inventions that made history. Plus all our stunning new animations, graphics, and special effects.

Running on Apple® or IBM®PC/Tandy,® *Where in Time is Carmen Sandiego?* is available in School Editions (2 programs plus Teacher's Guide) and Lab Packs (5 programs plus Teacher's Guide).

Introduce this new Carmen to your class. And make history unforgettable.

Brøderbund®

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70TCT

Thanks for teaching us what a computer can do.

We've been a student of yours for more than ten years now. By working closely with you, we at Apple Computer have gained many valuable insights into how to connect kids and teachers with computers in ways that motivate and inspire. We feel privileged to have such a relationship with teachers and look forward to many exciting collaborations ahead. It's been quite an education so far.

The power to be your best.™

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UPDATE

News for Computer-Using Teachers

EDITED BY LOUISE C. ORLANDO

INTERACTIVE VIDEO EXPLORES MIDEAST TURMOIL

American students have seen footage of the Palestinian uprising on television, but do they really understand what's going on? To explore the Arab-Israeli conflict in greater depth, ABC News INTERACTIVE and Optical Data Corporation have released *In the Holy Land*, an interactive educational videodisc. Religious, political, historical, and geographic issues of the Middle East are detailed by more than 700 maps, charts, and glossary frames.

In the Holy Land can be used with the Macintosh and any videodisc player. The package includes HyperCard stacks which allow users to navigate through the videodisc. The package also has an audio track in Spanish and closed captions.

For more information, contact Optical Data Corporation, 30 Technology Dr., Warren, NJ 07060; 800/524-2481.

(Circle 101 on Product Info. Card.)

SCHOLASTIC SHIFTS SOFTWARE COPY RULES

Copy protection is a hotly debated topic, and Scholastic Software has just added fuel to the discussion with its announcement that all of its new titles and many of its major current titles will be released without copy protection. Under Scholastic's new Copy Protection Policy, customers can use an unprotected "archival" disk, or set of disks, to make one legal copy. The policy also allows lab pack customers to purchase additional legal copy disks at much lower prices, and grants site licenses giving users permission to duplicate and distribute legal copies within their school. Scholastic Software's 1989-90 catalog details the complete copy protection policy. Call Scholastic Software at (800) 541-5513 for a copy of the catalog.

(Circle 102 on Product Info. Card.)

CARMEN SANDIEGO: THE ADVENTURE CONTINUES

She's back and on another whirlwind tour through history! *Where in Time is Carmen Sandiego?* is designed to bring history to life for users who chase Carmen and her time machine as they "pick up" some of the world's priceless artifacts.

The program runs on MS-DOS and Apple II machines. School editions, including a teacher's guide and one backup disk, retail for $54 for both the MS-DOS and Apple II versions. Lab packs containing a teacher's guide and five sets of disks are $109.95.

(Circle 103 on Product Info. Card.)

RESEARCH GRANTS AWARDED TO SCHOOLS

Thirty-seven schools nationwide have received educational research grants from Franklin Computers, the Institute for the Transfer of Technology to Education, and the National School Boards Association. Franklin Computers has awarded $186,000 worth of its products to the schools, which will in turn use them with primary, secondary, vocational, adult, and special education students. The study covers creative writing, language arts, spelling, and reference skills. One part of the study will focus on the mainstreaming of learning disabled students. Schools were chosen on the basis of proposals.

COMPUTER HELPS DEAF STUDENTS ACQUIRE SPEECH

In Japan, deaf and hearing-impaired students are gaining speech skills with the help of a computerized self-learning system. The system uses graphs that show how words are pronounced. Users try to recreate the pattern being displayed while the system monitors their pronunciation.

Here in the U.S., this special system, developed by Matsushita Electric Industrial Co., is being researched for adaptation to the English language by The Lexington Center (for the deaf and hearing-impaired), and The Graduate School of the City University of New York. For more information contact Mark Johnson, 212/546-2223.

HIGH-TECH INFORMATION, LOW-TECH LANGUAGE

If you want to know what's going on in the world of educational technology, *On Line, Computers in Education: What's Happening? What's Possible?* may be just the thing for you. It's written in plain English and is the first in a series of four reports from the National School Boards Association and Education Systems Corporation. *On Line* includes information on available applications, instructional technology for tomorrow, study vignettes, contact names, and a glossary of high-tech terms. Future reports will deal with creative financing, policy and planning, and video technology.

On Line is available at $12 per copy, $10 for five to 20 copies, $8 for more than 20 copies. Contact the NSBA Technology Leadership Network, 1680 Duke St., Alexandria, VA 22314; 707/868-6722.

(Circle 104 on Product Info. Card.)

DO IT YOURSELF WITH COMPUTER CARE BOOKS

What if, instead of waiting for the repair service to come and fix your computer, you were able to diagnose the problem and fix it yourself? TAB Books is distributing a line of computer care manuals that explain how to do just that.

The *Apple Care Manual* is available for $16.60 from Windcrest Books, order # 3121. *PC Care Manual: Diagnosing and Maintaining Your MS-DOS, CP/M or Macintosh System* (# 2991) and *Commodore Care Manual: Diagnosing and Maintaining Your 64 or 128 System* (#3141) are also available. If you'd like more information, write to Lee Ann Browning at Tab Books Inc., Blue Ridge Summit, PA 17294-0850; or call 800/822-8138 or 717/794-2191.

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LESSONS TO BE LEARNED FROM SCIENCE HELPER

Stumped for a fresh idea to teach students science or math? PC-SIG's *Science Helper CD-ROM* might be able to help you out. Now available at Radio Shack, *Science Helper* contains 1,000 science and math lesson plans for K-8 from such projects as "Science: A Process Approach," "Unified Science/Math for Elementary School," or "Conceptually-Oriented Program for Elementary Science." These public domain lessons include

teacher written descriptive summaries.

Science Helper is available for $195 from Radio Shack (catalog # 90-5604). For additional information contact PC-SIG, 1030-D East Duane Ave., Sunnyvale, CA 94086; 408/730-9291.

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CELEBRATE THE ONE-COMPUTER CLASSROOM

Teaching In the One Computer Classroom, a book from Tom Snyder Productions for K-12 teachers, supplies ideas and suggestions to make the most out of the single computer environment. The book retails for $19.95. Contact Tom Snyder Productions, 90 Sherman St., Cambridge, MA 02140; 800/342-0236.

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LEGO TC LOGO GOES MS-DOS

The software-hardware learning system that combines Lego bricks and gears with Logo language, Lego TC Logo, is now available in an MS-DOS version.

If you'd like more information about Lego TC Logo or other Lego educational products, contact Sarah McDonald, Lego Data, 555 Taylor Rd., Enfield, CT 06082; 800/527-8339.

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TEXAS OPTS FOR ONLY THE BEST

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Schools outside of Texas can receive the 1989 Only the Best for $24.95 prepaid (or $26.95 billed) from ENS, P.O. Box 1789, Carmichael, CA 95609; 916/483-6159.

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RUGGED, COMPACT CARTS FOR SCHOOL COMPUTERS

Anthro's All American computer carts, constructed of steel, can mobilize up to 150 pounds of hardware. The cart is 24" x 30" and comes with one stationary shelf and an optional swing-out shelf made for a printer. The cart comes in red, white, or blue.

If you'd like more information, contact Anthro Corp., 3221 N.W. Yeon St., Portland, OR 97210 ; 503/241-7113.

TOLTRAN TACKLES TEACHER-PARENT LANGUAGE BARRIERS

Educators in New York and Washington are using their MS-DOS compatible computers to communicate better with Spanish-speaking parents. As reported previously in Update, Toltran Ltd. has pioneered the use of artificial intelligence to create a software system that translates foreign languages in grammatically correct form. Developed for business use, this system is now being used by classroom teachers to send out bulletins, notices, and letters in Spanish as well as English, and to translate letters from Spanish-speaking parents into English.

Currently Spanish and English are the only languages the system can translate, but Toltran plans to add French, Italian, Russian, Japanese, Mandarin Chinese, and Vietnamese over the next several years.

The cost of the complete system is $2,000 for a source language module, a destination module, and a users manual. To receive a demonstration disk, send $10 to Toltran Ltd., 119 D Shorline Rd., Barrington, IL 60080.

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Understanding current events is something that Facts On File has been helping people do for 50 years. This weekly comprehensive summary of national and international news is compiled from a broad range of news sources. This year, Facts On File makes researching news coverage as easy as CD-ROM!

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Facts On File News Digest CD-ROM can be used with Macintosh and MS-DOS compatible computers and is available to current *Facts on File* print subscribers for $595, or $695 for non-subscribers in the U.S. Annual updates are $195. For a demonstration disk contact Suzanne DeVito at Facts On File, 460 Park Ave. South, New York, NY 10016; 212/ 683-2244.

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SILLY STORY WRITING WINNERS

Radio Shack and The Learning Company awarded more than $25,000 in prizes to winners of the 1989 "Silly Story" Writing Contest. Contest organizers report that they received more than 40,000 entries from over 2,000 schools from all 50 states.

The "Silly Story" Grand Prize winners were Melody Johnson of Washington Elementary School, Kingsport, Tenn., and Melissa Chavez of Truth or Consequences Elementary School, Truth or Consequences, N.M. They won a trip to EPCOT Center in Orlando, Fla., with their parents, plus a collection of software programs from The Learning Company. The schools sponsoring the Grand Prize winners will receive a Tandy 1000 SL computer system, color monitor, and The Learning Company's School Editions.

The contest was a multi-curriculum activity combining art and writing. Children aged seven to ten were asked to choose a "Silly Story" template from *Writer Rabbit* software, finish the story by writing in missing sentence parts with their own words, and illustrate their version of the story.

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teacher written descriptive summaries.

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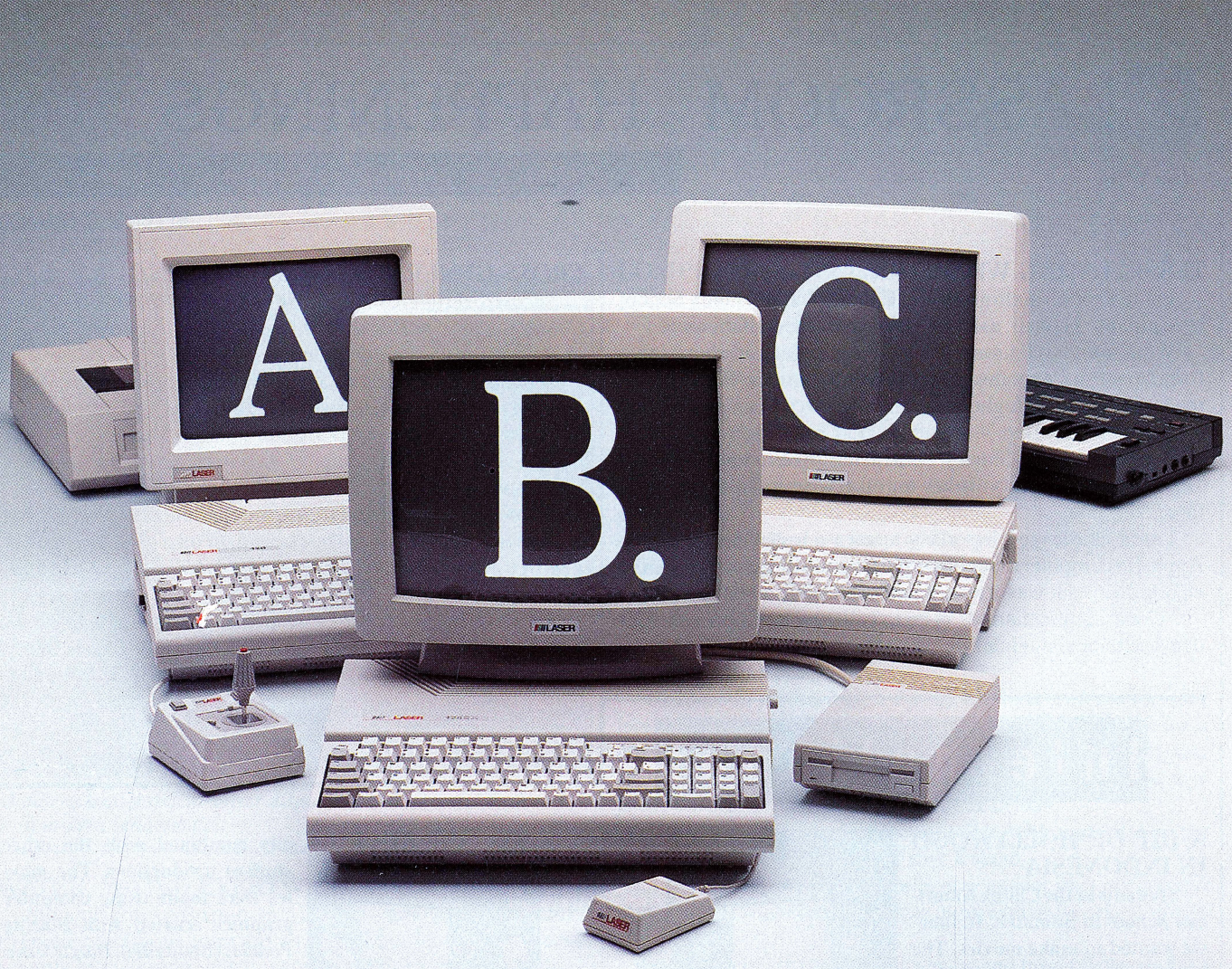

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CIRCLE 4 ON READER SERVICE CARD

CLASSROOM HAPPENINGS

What's Happening in Computer Classrooms

BY LOUISE C. ORLANDO

TESSELLATING WITH LOGO

Laura Koide's sixth graders at Kanoelani Elementary School in Waipahu, Hawaii, are all talking about tessellations.

What are tessellations? "They are interlocked shapes that form a pattern," explains student Weston Eguchi. "They can be made of curves, straight lines, and a variety of angles as long as they don't overlap."

Another student, Shirley Touchi, describes a tessellation as "repeating for eternity. It has to, otherwise it isn't a tessellation," she says.

Laura challenged her class to create tessellations on the Apple IIe computer using Terrapin Logo. After a lot of time and effort, the result was a tessellated class quilt.

"Creating tessellations is an excellent way to provide students with challenging thinking experiences," Laura says.

CROSS-GENERATIONAL COMPUTING

Second- through sixth-grade students at Berlin Worcester Country school in Berlin, Md., are closing the generation gap as they teach their elders about computers!

Second-grade teachers Sara Quillin and Ruth O'Bryon organized a year-long "Zoom the Generations" project in which the students teach word processing, disk use, and other computer essentials to community members, teachers, and their grandparents.

As part of their computer instruction, the kids showed their visitors how an entire cookbook could fit on a disk, how to make a poster or sign, and how names and addresses are put into a data base.

Meanwhile, the school's kindergartners held one-on-one sessions with adults. As a result, 85-year-old Bessie Moore received computer tutoring from kindergartner Bradley Martelo!

International

A BIT OF HOLLYWOOD IN INDONESIA

Students at the Caltex American School in Sumatra, Indonesia wanted to make movies. The problem was their school didn't have a camera or a camcorder. So instead they used the school's Apple II computers to create their own "Hollywood" masterpieces.

The Caltex school is located in the middle of an oil camp in a remote part of Indonesia. Its 58 students in grades K-8 are the children of Texaco and Chevron employees.

American "film" students in Indonesia: The next Hollywood producers?

To create their movies, Caltex's fourth- to sixth-grade students formed three production teams. Each team chose a theme, wrote a story, and produced a computer video which was eventually combined with the other student productions. The movies were made using computer graphics created with *Blazing Paddles* (Baudville), *Dazzle Draw* (Broderbund), and a Koala Pad, then recorded on a VCR using an RCA dubbing cable. Using *Print Shop* (Broderbund), the students were able to include video titles. The students also chose to dub their movies with popular music to give them true Hollywood "razzamatazz."

The completed movies "premiered" at the annual school fair, where parents viewed the masterpieces and listened as students explained the process of making computer-generated movies. Steven Spielberg, watch out!

IT'S ALL IN YOUR HEAD

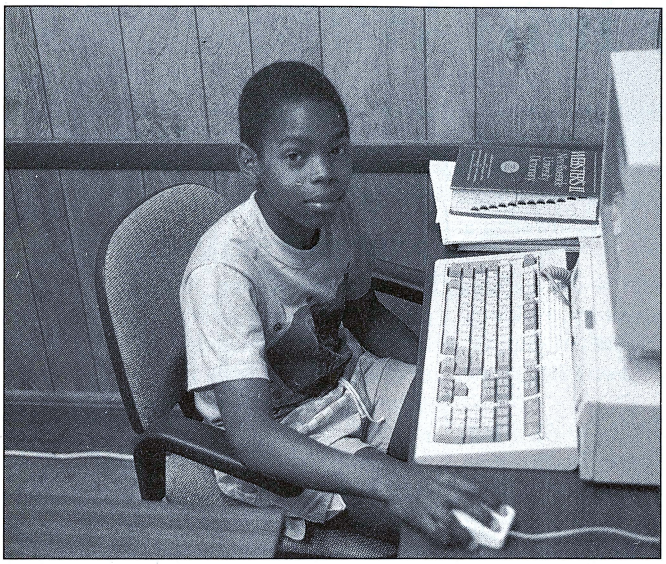
Students at the Saudi Arabian International School in Riyadh, Saudi Arabia really know how to put their heads to good use: they hung them on the wall! Their teacher, Sandra Slater, used* AppleWorks *(Claris) and an idea from the* 101 Word Processing Idea Book *to help students create a "head-y" bulletin board they call "Picturing Ourselves."

Each student taped a transparency of a head to the computer monitor and wrote either a story or a poem about themselves inside it. Then, printouts of the head-shaped writings were placed on a bulletin board background shaped like the heads of a boy and girl.

"The students really enjoyed the project," says Sandra. "They wrote some really great things about themselves."

Students at the Saudi Arabian International School are using their heads!

SPECIAL HAPPENINGS



Middle-school problem-solver dispatches bottled water to thirsty Boston-area schoolmates.

WATER, WATER EVERYWHERE!

Students from a Boston-area middle school used computers to create a fictitious company to deliver bottled water to actual schools in their area which were found to have high levels of lead in their drinking water.

The students were part of a six week employment/mentor program at Massachusetts Bay Community College in Wellesley Hills, Mass. They used a program called *Water to the Rescue!*, a simulation game developed by Kenyon Brown, a computer literacy specialist at the college. Brown created the simulation as a result of an actual lead investigation during which bottled water was shipped to the troubled areas.

Using IBM PS/2 Model 30 and 50 computers, the students worked in teams to set up a school/customer data base, an accounting system, and billing system. Each team member was given a specific job as route manager, bookkeeper, or truck driver. The route managers were responsible for overseeing the bookkeepers and truck drivers, and then reporting to Kenyon (the general manager) on how "business" was progressing.

Students studied the area and used *dBase III Plus* data base management software program to create a data base of all the schools. The bookkeepers used *Lotus 1-2-3* electronic spreadsheet software to create a simple accounting system and used *WordPerfect* word processing program to create and generate the bills. The truck drivers also used *WordPerfect* to create and update their delivery route street directions. Everyone kept journals and wrote about issues raised during the simulation. Problems such as a heat wave, road construction, rising production costs, and a potential union strike were written about and "solved" by each student.

"I think the simulation was successful," says Kenyon, "because it involved critical thinking skills, such as analyzing a problem, using a map, following directions, sequencing tasks, and reading and writing."

COMPUTERS FOR CHILDREN WITH HEAD INJURIES

Lauren came to the Upton School after a head injury caused memory loss and partial paralysis, which has affected her left hand. With a lot of hard work, Lauren trained her right hand to operate a computer and now can word process letters and play the *Oregon Trail*, her favorite game.

The Upton School is a home and hospital school for special needs students in the Baltimore Public School District. Upton's Transition Head Injury Program has started using computers to meet the special needs of its students.

Children in the head injury program have suffered memory loss due to head trauma and some, like Lauren, experience a physical loss as well. Computers have been invaluable in meeting each student's individual cognitive and relearning needs, says Roland Huebner, science department chairman.

"Computers are perfectly compatible with and vital in the rehabilitation of each student," says Roland.

Another student, Michelle, who may appear slow or forgetful in a regular class setting, becomes quite expressive when using a computer.

"Computers are needed in the home and hospital classes for a variety of reasons," writes Michelle, "but the most important reason is to enhance students' (and my) learning."

MAC-WRITING IN COLORADO

Click click click... That's the sound of students working on Macintosh computers. But they aren't flying simulated airplanes or blowing up tanks—they're writing!

With the help of special Chapter II funds, Christine Crnkovich's elementary students in Louisville, Colo., have access to Macs, ImageWriter printers, and software like* MacWrite *and* MacPaint *(both from Claris) and* PageMaker *(Aldus). As a result of the Mac program, students in kindergarten, first, and fourth grade are improving their writing and reading skills at a very fast pace.

"Each student writes, revises, edits, and writes again," Christine says. "They read their stories to friends, rewrite, and finally add drawings. Students spend over an hour writing and would spend more time if they could."

But what's really surprised Christine are her students' reading scores, which are higher than they had ever been in her 12 years of teaching.

"I'm sure that it's the word processing that has helped these students to be confident and competent with writing," says Christine.

BE A REPORTER!

Come on, all you elementary and middle school educators! We know you're out there! What exciting computer project has your classroom or school been working on lately? We'd like to tell our readers about it in a future edition of "Classroom Happenings."

BY CAROLYN FETNER AND KAY JOHNSON

Turning Teachers into Word Pros

Writing is a daily necessity for both teachers and students. With word processing, it becomes a necessary pleasure instead of a necessary chore.

At Gung Ho Elementary, everyone's gone word-crazy. Teachers there use word processing software and their classroom computers to create a parent newsletter, produce form letters (behavior checklists, field trip permissions, and so on), write personalized notes to students in response to their classroom work, and edit student work. Gung Ho students have discovered that word processing lets them write, revise, edit, store, and print their creative and research work with little pain and lots of gain.

Not the case at So So Elementary. Teachers put off their necessary written tasks indefinitely, while students feign broken arms to avoid the tedious revising and recopying that have historically been a part of writing. It's not that the school doesn't have computers and word processing software; it's just that no one knows how to use them. Fear of technology has left So So students and teachers wordless.

What makes the difference? Effective inservice training for teachers. At Gung Ho, they've discovered a few key factors in getting their teachers—and by extension, their students—up and running with word processing.

SUPER SOFTWARE

The first trick is to select software that's both powerful enough for teacher administrative use and easy enough for students to use. Some of the most popular programs in elementary schools include:

AppleWorks (Claris)—This powerful program contains data base and spreadsheet programs, as well. It is best used by teachers and upper elementary students due to extensive commands. A site license is available, permitting unlimited copies to be produced at a designated site (school).

Bank Street Writer II (Scholastic)—Useful for teachers and upper elementary students, this program is not easy to manipulate but allows for more sophisticated applications than some of the easier programs. It is available individually or in a lab pack.

MECC Writer (MECC)—An easy-to-use program for elementary children, *MECC Writer* permits unlimited duplication rights to systems subscribing to the MECC service.

Magic Slate II (Sunburst)—Available individually or as a lab pack, this program provides the capability of three different sizes in print. This enables the beginning writer to see a simple story in primary type, while advanced writers produce their lengthier writings in regular type.

Scholastic pfs: Write (Scholastic)—A no-nonsense word processor with full editing features, suitable for upper elementary students and adults. Integrates with an easy-to-use data base manager and spreadsheet program as well.

KEYBOARDING BRUSH UP

To get the most out of any word processing program, you must know something about the computer keyboard. Even teachers who know how to type may benefit from keyboarding practice. They can use the handout on page 13 for themselves before trying it out on their students. For teachers who are starting from scratch, you might suggest keyboarding software that they can learn along with their students such as Scarborough Systems' *Mastertype* (for upper grades) and Optimum Resource's *Stickybear Typing* (for lower grades).

PRIORITY PRINTING

Word processing without a printer guarantees frustration! For teachers, having all the form letters in the world on disk amounts to little if they can't print them out. And students require a tangible product as proof of accomplishment. Schools need to begin acquiring printers in greater numbers. However, a school with only one available printer may begin a word processing program. Users may store their work on data disks and print their work at a scheduled time. Not ideal, but it can be done.

NOW ADD PIZZAZZ!

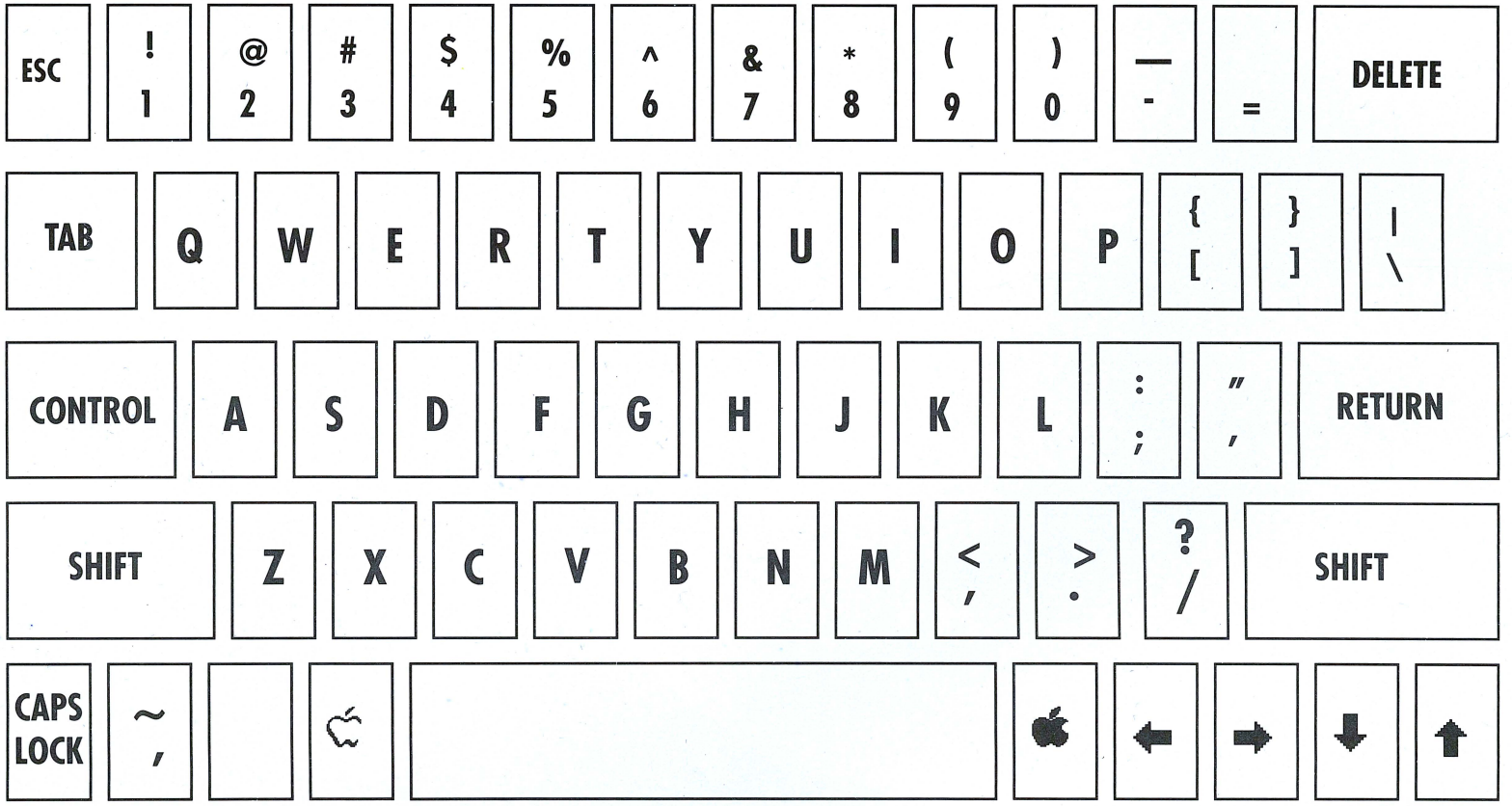
Once your teachers get the hang of basic word processing, encourage them to show off a little! They might want to play around with the various formatting options your word processing program offers, such as a variety of type sizes and faces. They might look into doing a "mail-merge" with a compatible data base program for bulk mailings to parents. They could investigate printing out onto acetate sheets to make overheads. They could share word processing files of lesson plans, test questions, and writing exercises. They might even stretch their newfound skills into mastery of desktop publishing, using such friendly packages as *Publish It!* (Timeworks Inc.), *Personal Newsletter* (Softsync Inc.), or—if they want to get students into the act— *The Children's Writing and Publishing Center* (Learning Co.). Programs like these will allow teachers in your school to integrate text, fancy type, and graphics for everything from a faculty newsletter to a schoolwide student journalism project.

Carolyn Fetner and Kay Johnson are Media Specialists at Dyer Elementary and Centerville Elementary, respectively, in Gwinnett County, Ga.

Jim Lambrenos

PAPER PAL FOR KEYBOARDING PRACTICE

Confident fingers make the most of any word processing program! Use this keyboard stand-in to brush up on your own typing skills. Then photocopy it for your students to use. (Note: This keyboard is modeled on an Apple II computer. If your school uses other computer brands, you'll need to modify it for use.)



KEY NOTES FOR WORD PROCESSING

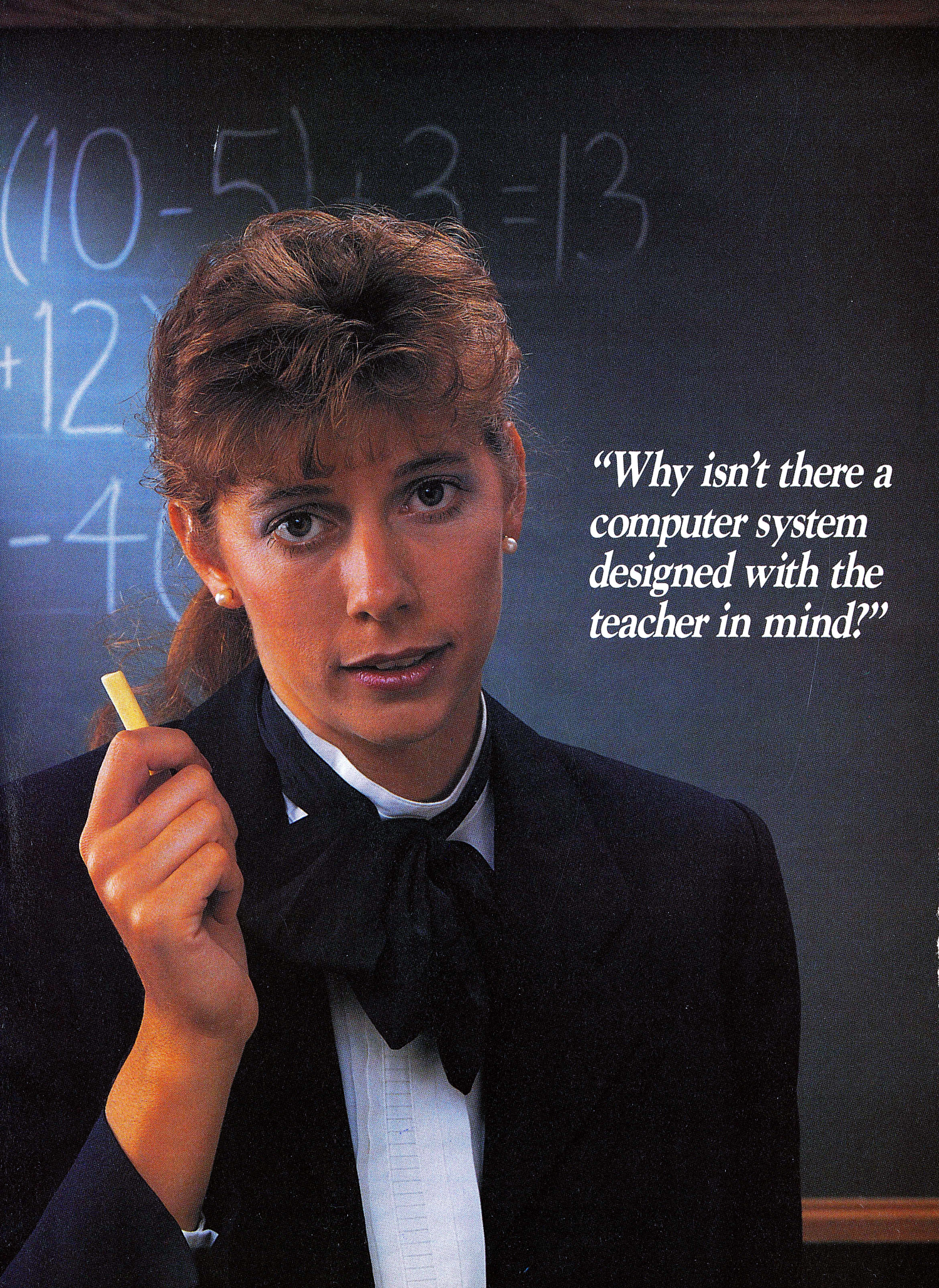
•**CURSOR:** This flashing line or square lets you know where the text you type will appear on screen.

•**RETURN** or **ENTER:** Since word processors have a function called "word wrap," which automatically moves your cursor to the next line as you type, you'll only need this key to specify the end of paragraphs or to add extra blank lines of space.

•**DELETE:** This key is as good as its name! Press it, and text to the left of the cursor will disappear.

•**ARROW KEYS:** These keys let you scroll (move) up, down, and across a document without disturbing the text.

•**ESC** and **CONTROL:** Different word processing programs use these keys to specify different functions. Check your manual!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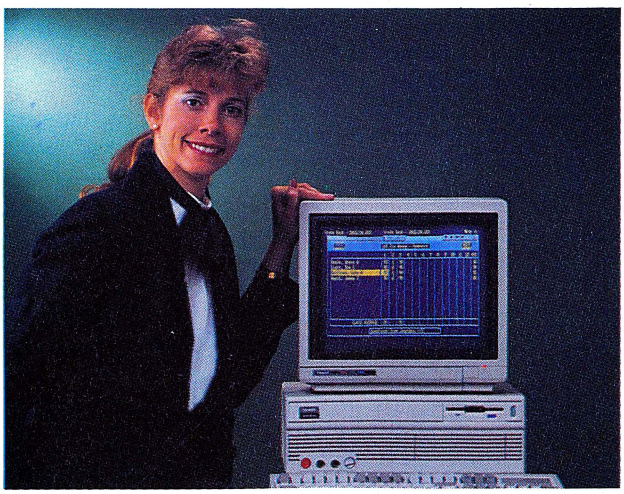

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CIRCLE 5 ON READER SERVICE CARD

WELL-MANAGED CLASSROOM

Computer Solutions for Your Administrative Tasks

BY ANN DANA AND THERESE MAGEAU

Hypermedia Hypermania

It's time to let your imagination roll! At your fingertips is "hypermedia," one of the most exciting and innovative curriculum tools available to educators. Hypermedia is software, often described very simply as an authoring tool, but it is much, much more. Bill Atkinson, the creator of *HyperCard,* the original hypermedia, calls it an "electronic erector set," meaning it's a tool that can help you build new approaches to teaching and learning.

Imagine a stack of index cards. Now imagine that each card has a "button" on it, a button that, when you touch it, will automatically connect you to another card in your stack, to another stack of cards, or to a graphic that may be sitting in some other file. This, in a nutshell, is the basic structure of hypermedia such as *HyperCard* (for the Macintosh), *HyperStudio* (for the Apple IIGS), *Tutor-Tech* (for the Apple IIe and c), and *LinkWay* (for the IBM).

Hypermedia experts will talk about how you can link up to music programs, video, slide shows, CD-ROM files, or any combination thereof, but for those of you just starting out, let's forget the "hype" of hypermedia and instead look at some simple ways it can help you manage your classroom and your curriculum.

CASE STUDY: COMPUTER RULES

Take the example of a computer lab coordinator. One of her primary reponsibilities is to ensure the proper care of the lab equipment, which means teaching computer care rules to all students who use the lab. A hypermedia approach (see sample below) can teach students about the rules and etiquette of the computer lab, and at the same time, introduce them to a powerful new learning tool.

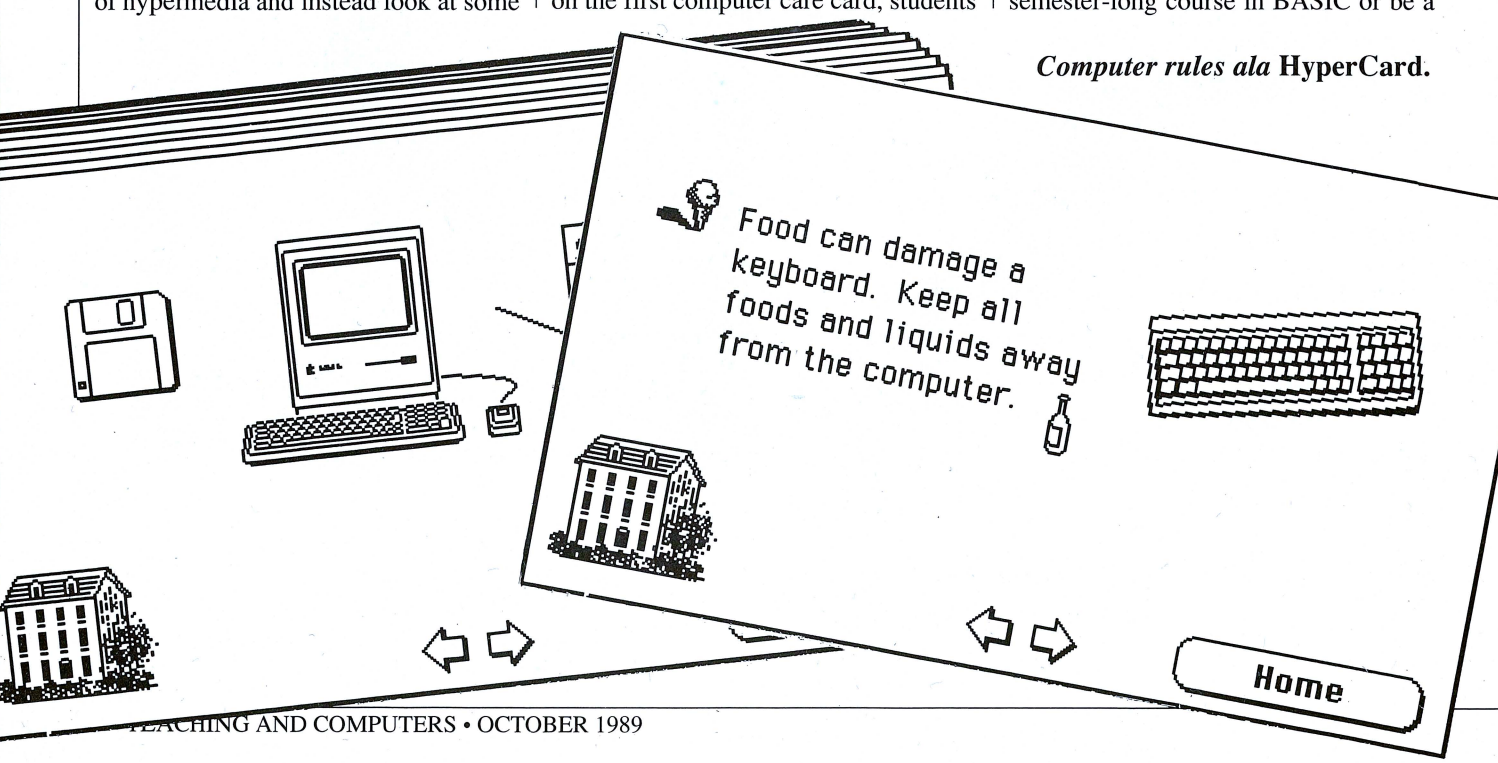
Hypermedia is structured very much like a sharp, critical mind: it works by making connections. The connections are both visual and cognitive. Students exploring a "stack" on computer care, for instance, will encounter on the first "card" pictures of the three main components of a personal computer system: disk, computer, printer. (For further explanation of hypermedia terminology, see Glossary. Hypermedia terms can vary, depending on the program. For this article, we'll be using and speaking *HyperCard.*)

By clicking on any one of the objects on the first computer care card, students can explore the rules associated with it. Clicking on the disk, for instance, can bring up a card about how to file disks. To explore deeper, students can click on the disk label and learn about proper methods for labeling disks. Key words can be also be programmed in, so students can do searches ("find 'disk drive'").

Perhaps the most exciting kinds of connections in hypermedia are the links that can be created between stacks. Students examining the computer lab rules stack, for example, can click on the school building button to connect them to other stacks that address other school rules, such as library etiquette or fire drill procedures. The connections, then, are not just between one fact and another, but between different school departments. All of school life can potentially be an integrated learning experience with the power of hypermedia.

RIDE THE LEARNING CURVE

Of course, none of this "just happens." Hypermedia is an authoring tool, which means you create the inter- and intrastack links yourself. But don't be intimidated by the prospect. You don't have to take a semester-long course in BASIC or be a



***Computer rules ala* HyperCard.**

computer-graphic artist to write a hypermedia program. (The cards you see here were done using existing *HyperCard* graphics.) Most hypermedia-ware comes with a tutorial that walks you through the process. This does take time—which we never seem to have enough of—but it's time that ultimately will be invaluably spent. For, once you have mastered the authoring concept, you can create a unit of study using hypermedia (your geography lessons will never be the same), use it to design an interdisciplinary curriculum (think how easily you can locate the connections between subject areas), or even create a sophisticated data base of student information (mere gradebooks will seem like a thing of the past).

It's possible that there is already a stack created that fits a unit you're teaching or a task you want managed. You can edit it to customize it to your needs. Remember Public Domain software? There are now stacks in that category. The Boston Computer Society, Apple Computer, and maybe even your local consortium or user group have them.

Hypermedia's greatest value, however, undoubtedly lies in its ability to let students explore the curriculum by creating their own stacks. Student stacks could simply be a report written on cards, with buttons on key words that would bring up definitions, additional information, and perhaps a graphic created with *Dazzle Draw* or *HyperCard*'s Paint Tool. Ideally, more sophistication would add branching to more cards and other subject stacks. Users would then be able to follow a path suited to their needs and interests. Students could explore each other's stacks, or even add to or co-author stacks; hypermedia is an ideal promoter of cooperative learning.

As teachers, hypermedia allows us to take on whatever role we want. We can be facilitators of students creating their own stacks. We can be authors, creating courses of study that explore subjects and aspects of subjects not available through textbooks. We can be better managers of our time, our curriculum, and our students.

Hypermedia means teacher empowerment. And that's something to get hyper about! ❦

Ann Dana is the microcomputer consultant for Hinsdale, Ill., Elementary District 181; **Therese Mageau** is an associate editor of *Teaching and Computers.*

GLOSSARY

hypermedia *n*: generic term for an authoring tool that allows users to organize and present information by "linking" or branching it to other information, graphics, or media such as video, laserdisc, CD-ROM files. The term comes from *hyper,* "that which is or exists in a space of more than three dimensions" and *media,* "a means of communication." Hypermedia programs, such as the ones listed below, use the same or similar terms to refer to some basic functions they all use.

Function	HyperCard	HyperStudio	Tutor-Tech	LinkWay
The basic unit on which information in entered	card	card	page	page
The means of grouping cards or pages	stack	stack	stack	folder
The icon on a card which, when clicked, provides the link to other cards or stacks	button	button	button	button
The main menu	home	home card	n/a	main folder
Pre-existing graphics that can be pasted onto a card or page	clip art	clip art	clip art	clip art

HYPERMEDIA'S "BIG FOUR"

HyperCard for the Macintosh Plus, SE or II. Specifications: Minimum 1 megabyte of RAM, two 800K drives or one 800K drive and 1 hard drive, System File version 3.2, Finder version 5.3 required. Special Notes: Apple now packages *HyperCard* on the SE's or Mac II's hard drive, or on the external hard drive for the Mac Plus. Persons who purchased their equipment pre-packaging, can buy *HyperCard* for $45 from any Macintosh dealer.

HyperStudio for the 128K Apple IIGS. Specifications: 1MB RAM. Special Notes: Comes with Roger Wagner's *Sound Studio*, a no-slot sound-digitizing card, a microphone, and a small amplified speaker; works with the Apple II Video Overlay Card. To order: Roger Wagner Publishing, 1050 Pioneer Way, Suite P, El Cajon, CA 92020, 619/442-0524; $129.95.

LinkWay for the 348K IBM PC or IBM PS/2. Specifications: Color graphics display monitor, mouse required. Comes on two 5 1/4" or one 3 1/2" disk. Special Notes: Also available separately is the *LinkWay Toolkit,* a set of routines to create additional graphics, animation and speech, among other possibilities. To order: IBM *LinkWay,* IBM, P.O. Box 1328-W, Boca Raton, FL 33429, 404/238-3245, $110. Washington Computer Services, 2601 North Shore Rd., Bellingham, WA 98226, 206/734-8248; $300.

Tutor-Tech for the 128K Apple IIe, IIc, or IIGS. Specifications: Mouse or joystick required. Unenhanced Apple IIe owners need a jumper block for their extended 80-column card to accommodate super resolution graphics. Special Notes: Program disk loads into the computer's memory, so users with only one disk drive will not be inconvienced. The program tutorial helps teachers design a test stack, and the separately purchased Grader program helps keep track of and evaluate student performance in *Tutor-Tech* stacks. To order: Techware Corporation, P.O. Box 151085, Altamonte Springs, FL 32715, 407/695-9000, $195; $290 for the *Tool-Tech Hypermedia Toolkit with Gradebook.*

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Can your computers pass this simple test?

Do they offer a broad range of advanced courseware?

What about networking and compatibility, or advanced features like multimedia capabilities?

Finally, will the computers in your school be flexible enough to handle your needs in five years? In ten years?

If you answered "no" to any of the above, chances are your computers are failing you.

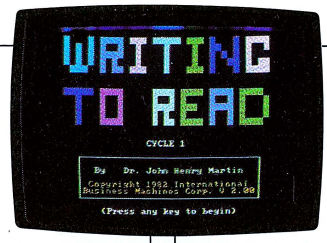
IBM is helping educators all across the country to realize the full potential of computers in schools, in ways they never thought possible.

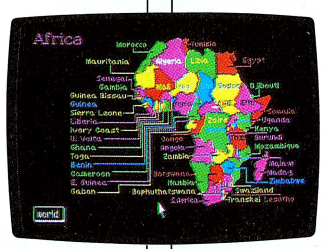
Our courseware has been developed with the help of more than 200 active teachers nationwide—courseware that's advanced, yet simple to use for

students from kindergarten through high school.

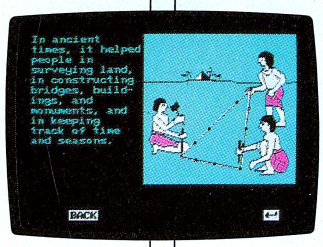
To complement our courseware, we've created a computer specifically for use in the classroom: the IBM PS/2 Model 25 desktop computer.

In addition to offering one of the smallest footprint sizes of any classroom computer (a little larger than a lunchbox), the Model 25 lets you take advantage of superior color graphics capabilities, a large easy-to-read viewing screen and incredible processing power. And since the Model 25 is compatible with other IBM personal systems, the courseware that runs on one PS/2 runs on every PS/2.





IBM courseware developed with teachers for teachers



No one offers you so many different types of educational tools, or more ways to use them. IBM Networking, for example, lets teachers link their computers to students or to other teachers to share courseware, multimedia programs and other types of information, across the hall, across the building or across town.

As your needs grow and change, IBM also gives you the flexibility to add to your network, whether it's one year down the road or ten.

IBM is also bringing subjects to life in ways you never thought possible. IBM LinkWay, for example, is a new, fun-to-use interactive multimedia tool that actually combines text, sound, color graphics and full-motion video.

LinkWay is a combination of hardware and software that works with the PS/2. With it, teachers can create special multimedia programs that work with their own curricula.

And there's so much more we're working on to help you teach. For a free catalog and/or classroom poster (please specify grade level), or for further information, call:

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IBM Corporation
P.O. Box 3900
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TODAY'S SOFTWARE, TOMORROW'S CHILDREN'S WORKSTATION

WE SEARCHED THROUGH THE BEST OF TODAY'S APPLICATIONS PACKAGES FOR ALL THE FEATURES WE'D LOVE TO SEE IN THE IDEAL ELEMENTARY SOFTWARE OF TOMORROW.

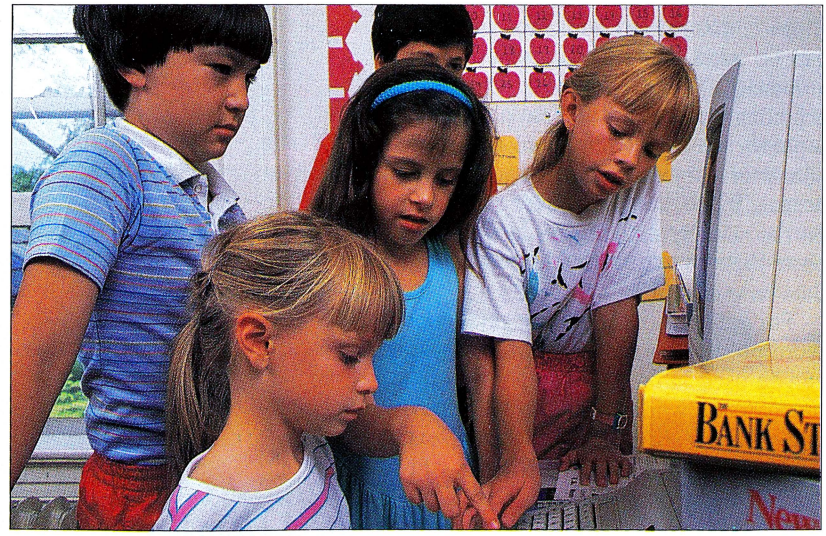
BY DR. BARBARA KURSHAN, BEVERLY HUNTER, AND SUZANNE BAZAK

What is a "Children's Workstation"? It's what we hope will be the elementary school computer of the future, with software that is fully-integrated, easy-to-use, and powerful enough to support learners not only in acquiring basic skills but also in solving problems, developing critical thinking skills, communicating ideas, and working collaboratively on multi-disciplinary projects.

But since we live in the present, we examined nearly 50 existing software products to identify functions and features that come closest to our workstation of the future. The programs we looked at all are used in schools now and provide one or more of the following functions: word processing and desktop publishing; data base; spreadsheet; graphics (including both graphic arts and graphing/mapping); telecommunications and networking; and instructional management

The software we examined was selected on the basis of popularity, current review, publisher reputation, and recommen-

dations of experts. As part of the examination, small groups of elementary-aged children used the software in an after-school learning center. The programs we looked at are listed on page 25. This article reports the highlights of our review; the existing packages which contain the features we sought are listed in italics throughout the text.



GENERAL FEATURES

Friendly interface
Easy integration

Suitable user interface and integration of functions are important in any workstation, but are especially critical for young children. The interface features we looked for include iconic menus *(Explore-a-Story);* input with keyboard, tablet, and/or mouse *(The Newsroom);* simple screen layout with only a few choices provided on the screen *(Kidwriter);* uniform screens, menu selection devices, and function access *(AppleWorks, Eight-in-One, The Children's Writing and Publishing Center);* a filing system with student directories and subdirectories *(A+);* and sound and voice output *(My Words, Talking Textwriter).* In terms of integration, we looked for integration of tools accessed from a main menu *(Kid Talk);* messaging among users and functions *(Bank Street Writer III);* integration of guides to systematic thinking and problem solving *(SemCalc, Homework Helper Math* or *Writing);* and a built-in calculator across functions *(Math Problem Solving Courseware).* In addition, to facilitate use of the Children's Workstation, some keyboarding activities should be included in the form of a "type" program to introduce the keyboard and other input devices at the workstation.

In general, a Children's Workstation should be simple enough for children to use yet sophisticated enough to be used by the teacher for instructional design and classroom planning tasks. These characteristics were not completely found in any one existing package. In addition, teacher users will require an effective teacher-oriented management system; we could not find good examples of a management system for tool applications for the classroom.

WORD PROCESSING and DESKTOP PUBLISHING

Basic text entering and editing
FIND and REPLACE feature
Speech option
Varied text sizes
Integration with graphics
Iconic menus
Simple print layout selection
Spell checker with word-addition option
Teacher template option

Of all the existing word processing and desktop publishing software we reviewed, *Kid Talk, Kidwriter, Magic Slate, Talking Textwriter,* and *My Words* were some of the most appropriate word processing packages for grades K-3. *Kidwriter* is very simple to use and provides students with both word processing and the ability to illustrate with clip art, although it does not allow a story to be edited once it has been saved. *Magic Slate* does not include graphics, but it does use large text (a 20-column screen) and has many more word processing capabilities than *Kidwriter. My Words* and *Talking Textwriter* have the extra feature of voice output; *Kid Talk* has both voice output and an excellent iconic interface. A new package called *FirstWriter* combines words, pictures, and voice output for children in grades K-2.

For elementary students of all ages, the *Explore-A-Story* series and *Bank Street Story Starters* combine word processing and graphics in unique ways. *Bank Street Story Starters* allow students to create story pages with personalized graphics using a mouse or a joystick. Pages can be

(Continued)

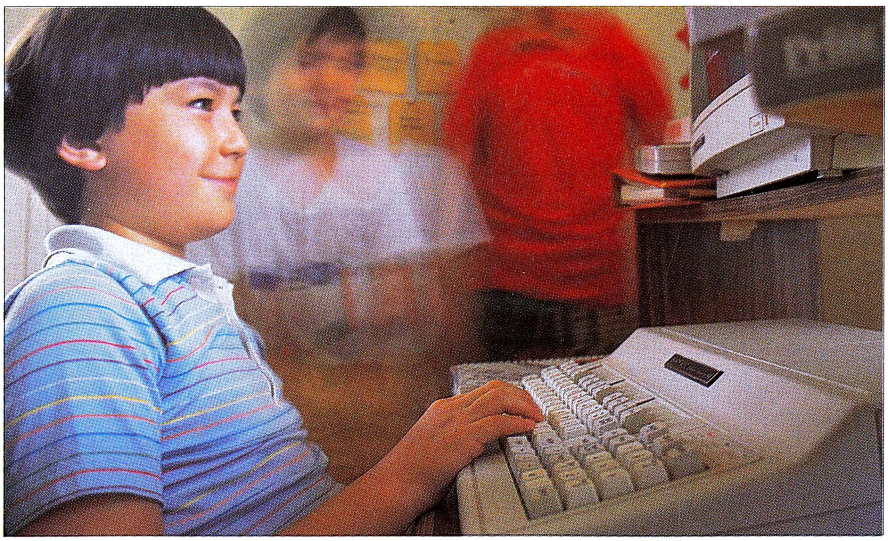
AS PART OF OUR REVIEW, SMALL GROUPS OF ELEMENTARY-AGED CHILDREN USED THE SOFTWARE IN AN AFTER-SCHOOL LEARNING CENTER.

flipped through like a book, text windows can be added, and illustrations can be animated. The *Explore-A-Story* series provides icon menus and simple mouse input for selecting from a bank of clip art characters, objects, text, and background scenes. By clicking the mouse anywhere on the screen, students are also able to enter their own text or add text from a data base of terms.

For grades 4-6, there are several good word processing packages. *Magic Slate* can be used in its 40-column or 80-column version, while *Bank Street Writer III* and *HomeWord* offer enhanced text, varied print options, and advanced editing. Of the three programs, *HomeWord* provides the easiest control components with its iconic menu selection; *Magic Slate* is controlled by single key stroke commands; and *Bank Street Writer III* has the menu at the top of the screen. All three provide students with a spell checker.

Special features for helping students organize information are provided in *Writer's Helper* and *Homework Helper Writing*. Both of these programs would usually be used in middle or upper grades, but have some appropriate applications for younger students. *Writer's Helper* allows the teacher to set up templates of questions to guide students through a particular writing project. *Homework Helper Writing* has a similar option, but the questions are generated by the program and not the teacher. *Writer's Helper* also provides several tools for evaluating student writing. One particular feature that could be adapted for elementary writing is the option for a teacher to specify up to 25 words that can be checked in a student's writing project.

Most of the software packages which adequately combined fundamental word processing features and graphics fell into the category of desktop publishing; these include *A+*, *Appleworks IIGS*, *The Children's Writing and Publishing Center*, *Newsroom*, and *NewsMaster*. Created specifically for elementary school students, *The Children's Writing and Publishing Center* provides simple enough screens to be used by even those with limited reading ability. All of the other packages are too sophisticated for independent use in early primary grades, although they have features that could be easily simplified and adapted for elementary students. *A+* has an excellent filing system allowing students to organize their work in files which are displayed as three-ring binders on the screen. It is also driven by iconic menus, as is *Newsroom* and *AppleWorks IIGS*. These packages and



NewsMaster all provide several different text fonts and the ability to integrate text and graphics on the same screen with text wrapping around or over pictures.

In our review of existing word processing and desktop publishing tools, we found several characteristics that would not be appropriate for a Children's Workstation. First, if speech is to be an option, it should be integrated into the writing process, not separated from it. Second, word processors that provided the standard 80-column format were not well received by younger children; those with larger text work better. Several programs allow students to create stories but give them very few, if any, options for editing those stories. The desktop publishing programs assumed a level of understanding of publishing that was not realistic for elementary age students. Finally, several programs have quite complicated commands for performing special functions, requiring students to memorize keystrokes rather than simply making a selection from a menu.

DATA BASES

Basic features for entering, editing, searching and sorting data
Ability to integrate pictorial data
Integration with graphics and graphing tools
Voice output option
Ample storage
Interface to laboratory equipment for data collection
Networking capability for collaborative use

All of the traditional menu driven data base management programs we reviewd *(PC File, AppleWorks,* or *Computer Literacy Through Applications)* provide basic data entry, data editing, search, and sort features. All are adequate for grades K-6 when used by the teacher or curriculum developer to set up data base files which students can then manipulate.

An excellent example of a data base designed for data manipulation by students is the simple data base integrated into the *Where in Europe is Carmen Sandiego?* program. This data base is limited to information for a specific use, but for young learners it models appropriate search algorithms for problem solving. The *Explore-A-Science* programs come closest to providing data base features that would allow younger students to enter text, graphics, and numerals. These programs provide students with an internal pictorial data base, with which pictures and diagrams could be labeled with text and then stored on the disk. However, the data bases in the *Explore* series are limited and do not provide the functions necessary for searching and sorting data.

For older students and more sophisticated applications, the data base tool in *Appleworks GS* allows graphic art to be stored as data. *Think Quick* comes with a graphing tool for editing pictograph symbols. Although the manipulation of the graphical data is limited, these features indicate an interesting development for

elementary level data base applications.

The *Science Toolkit* program provides a model of interfacing a data collection program with laboratory equipment such as probes and sensors. For a glimpse at the potential for collaboratively shared data, check out *Kids Network*.

Overall, we found that several otherwise useful data bases limited the search and sort features; these should be standard issue in the data base function of a Children's Workstation. Another disadvantage of many of the existing data base programs is their standard 80-column display format, in which data fields are simply listed one after the other on the screen. Information in a Children's Workstation data base program should be displayed using a more creative visual approach.

SPREADSHEETS

One screen with row and column format
Simple formatting features
Algebraic equation format for calculations
Teacher template option
Access to onscreen calculator
Integration with graphing tool

Very little is currently available in spreadsheet applications for primary school students. For older elementary students, *Computer Literacy Through Applications* provides the traditional spreadsheet format, but with limited spreadsheet functions (although it does offer formulae entry in the form of algebraic equations). Of the more sophisticated programs that integrate with other tools, *AppleWorks* allows the user to format whole rows or columns, while *Eight-In-One* provides access to graphing capability.

The *Semantic Calculator* (otherwise known as *Semcalc*) and *Homework Helper Math* combine the traditional spreadsheet row-column format with special features that promote the development of good problem solving skills. *Semcalc* forces students to think about the semantic meaning of the data they are entering and the units in which they expect their output to occur. *Homework Helper Math* provides on-screen instructions for a step-by-step heuristic approach to problem solving. Students can practice with problems that are already set up in the program or use the tool to solve their own problems. When solving problems that are already defined in the program, students are able to view onscreen diagrams depicting the problem to be solved.

An onscreen calculator as a built-in feature of an elementary workstation is available in varying forms in some tool packages for elementary school students. The calculator in *Homework Helper Math* is actually an equation solver and does not provide the traditional calculator features. *A+* offers a very nice built-in calculator that the student can access from a variety of places within the tools. An additional program that features a "pseudo" calculator is *Mathematics Courseware Problem Solving*, which uses the calculator to help students set up word problems in proper mathematical equations and do the calculations.

GRAPHICS

GRAPHING AND MAPPING
Integration with data base
Integration with spreadsheet
Simple data entry
Easy editing
Teacher template option
Multiple format options (including pictographs)
Color
Lab equipment interface with real time graphing
Map display

GRAPHIC ARTS
Basic shape-creating functions
Optional input devices
Variable text fonts
Ample available clip art
Color
Integration with word processor
Integration with data base
Integration with graphing tool for pictographs

Graphics are a vital part of our Children's Workstation. Current graphic arts packages can be divided into three categories: those that use clip art only, those that allow students to generate their own art, and those that provide both clip art and free form drawing. Clip art-based graphic packages that are exceptionally good are *Print Shop* and *Super Print*, while *Draw-It, A+, Dazzle Draw, Paintworks*, and *Blazing Paddles* all provide students with features for creating their own graphics with tools for drawing circles, boxes, and straight lines. All five programs provide for text additions; *Dazzle Draw, Paintworks*, and *Blazing Paddles* have the extra advantage of allowing input from something other than the keyboard (such as mouse, graphics tablet, or joystick). *A+, Dazzle Draw*, and *Blazing Paddles* all have nice iconic menus which children find easy to understand and use; *Dazzle Draw* has additional pull-down menus for special filing and editing features.

The ability to integrate graphics with a word processing document increases the power of any drawing tool. *Multiscribe, A+*, and *Appleworks IIGS* currently provide this integration.

Several drawing packages force students to draw pictures using the keyboard and plotting pixel by pixel. These packages are cumbersome and could not compare to those that provide input from some other source. Several packages also have very limited editing features: once a drawing is produced, it is very difficult to change. Flexibility when drawing and writing should be essential.

Graphing and mapping programs which allow students to display numeric data graphically are also an essential part of the Children's Workstation. Two existing programs which provide this capability are *Easy Graph II* and *Eight-In-One Graphing*. *Easy Graph II* is appropriately named in that it is very simple to learn. Although it limits the user to a small number of data items, it makes for simple creation of bar graphs, pie charts, and (especially nice for younger children) pictographs. *Eight-In-One Graphing* is a more sophisticated graphing package and can be integrated with the *Eight-In-One Data Base* and *Spreadsheet*.

Graphing is an added function to several excellent programs. *Think Quick*, a problem-solving game, provides many different on-screen symbols that can be edited by the user when creating original *Think Quick* games; a similar symbol editor would be appropriate for creating personalized pictographs. *Science Toolkit* provides a lab equipment interface which allows for "real time" graphing of data students collect.

(Continued)

There are two special elementary school programs that approach graphing, charts, and tables in a unique manner. *Kids Network* provides a special feature for displaying data on maps. *Project Zoo* teaches students about graphs and charts in the setting of a zoo, and even allows students to build a zoo by examining information about animals and visitors in graphs and "pseudo" data bases.

COMMUNICATIONS

Both local area networking and telecommunications ability
Structure for collaborative learning
Shared data bases

Local area networking and telecommunications support are essential to our Children's Workstation. In addition to the convenience and range both kinds of networking provide, they can support collaborative learning through messaging among students, teachers, and administrators and through use of shared databases. They also add power to instructional management.

Only one of the existing programs reviewed was designed to take this kind of advantage of local area networks. *Bank Street Writer III with E-Mail* has a built-in feature to be used with an Apple Talk Network, allowing students to write, send, and receive "mail" to and from other students and teachers.

There is also at least one existing program which makes good use of telecommunications for access to information networks and bulletin board systems. *Kids Network* provides for telecommunications among schools involved in its network, and has an easy-to-use communications interface for uploading and downloading messages and data base information. In addition, a new version of this front-end interface will provide other tool capabilities such as word processing and graphics.

CONCLUSION

As we looked for current software products that help point the way to a next generation Children's Workstation, we found many excellent "pieces" but no single existing product that exemplifies both the desired integration of functions and the suitability of interface we seek. While integrated software packages which include word processing, database, spreadsheet, graphing, pictures, and communications are found in many homes and offices, none of the current integrated products are designed for elementary aged children or classroom environments. Providing such a workstation for children will require a more powerful hardware base than is currently found in schools. Current programs designed for children are constrained by the installed base of equipment. However, it is time to begin planning the Children's Workstation software for the next generation of computers that will become available in schools over the next few years.

Dr. Barbara Kurshan is a freelance educational technology consultant based in Roanoke, Va.; **Beverly Hunter** is president of Targeted Learning Corporation of Amissville, Va.; **Suzanne Bazak** is computer coordinator at the American Embassy School in Vienna, Austria.

GLOSSARY

Interface: The "control panel" by which the computer user interacts with a software or hardware product or system; includes all facets of how you tell the computer what to do and how it asks you what to do. If using a program is as easy as ordering a pizza delivery by phone, the program is said to have a "friendly interface."

Integration: The ability of different programs to work together easily. Ideally integrated software tools would allow you to create a data base of the planets, transfer data into a spreadsheet to calculate travel time between planets, feed the spreadsheet figures into graphing program, shift to a drawing program to create portraits of the planets, then pull it all together in a word processing or desktop publishing document—all without reentering a bit of data.

Voice output: The ability of software and hardware to "talk"—that is, to read aloud in a computer sythesized voice what appears on the screen. Voice output requires hardware with built-in or added-on speech synthesis capability, plus speech-equipped software.

Iconic menu: Lets you command your computer by selecting small, simplified pictures representing different functions, instead of typing in numbers, words, or codes.

Template: A reusable software tool "shell" into which the user can type specific data.

PUBLISHERS ADDRESSES

Baudville
5380 52nd St. SE
Grand Rapids,
MI 49508
616/698-0888

Britannica Software
(DesignWare/EduWare)
345 Fourth St.
San Francisco,
CA 94107
800/572-2272
415/546-1866

Broderbund
17 Paul Dr.
San Rafael, CA
94913-2947
800/527-6263
415/492-3500

ButtonWare Inc.
P.O. Box 5786
Bellevue, WA 98006
800/528-8866
206/746-4296

Claris
440 Clyde Ave.
Mountain View,
CA 94043
415/960-1500

Conduit
Univ. of Iowa
Oakdale Campus
Iowa City, IA 52242
319/335-4100

D.C. Heath
125 Spring St.
Lexington, MA 02173
800/334-3284

DLM
One DLM Park
P.O. Box 4000
Allen, TX 75002
800/527-4747
800/442-4711 in Texas

First Byte
2845 Temple Ave.
Long Beach, CA 90806
213/595-7006

Hartley Courseware
Box 419
Dimondale, MI 48821
800/247-1380
517/646-6458

Houghton Mifflin
Educational Software
Division
Dept. 39, Box 683
Hanover, NH 03755
800/258-9773

The Learning Co.
6493 Kaiser Dr.
Fremont, CA 94555
800/852-2255

McGraw-Hill
1200 NW 63rd
Oklahoma City,
OK 73116
405/840-1444

Mediagenic (Activision)
3885 Bohannon Dr.
Menlo Park, CA 94025
415/329-0800

MindPlay
100 Conifer Hill Dr.
Building 3, Suite 301
Danvers, MA 01923
800/221-7911
617/774-1760

Mindscape
3444 Dundee Rd.
Northbrook, IL 60062
800/221-9884

National
Geographic Society
Educational Services
Department 88
Washington, DC 20036
800/368-2728
301/921-1330

Paperback Software
2830 Ninth St.
Berkeley, CA 94710
800/443-0100
415/644-2116

Savtek Corp.
P.O. Box 1077
Waltham, MA 02254
617/891-0638

Scholastic Software
P.O. Box 7502
2931 East McCarty St.
Jefferson City,
MO 65102
800/541-5513

Sierra On-Line
40033 Sierra Way
Oakhurst, CA 93644
209/683-4468

Spinnaker
One Kendall Square
Cambridge, MA 02139
617/494-1200

Springboard
7808 Creekridge Circle
Minneapolis, MN 55435
800/654-6301
612/944-3912

Sunburst
Communications
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SOFTWARE SUMMARY

KEY TO HEADLINES

- A: MS-DOS
- B: APPLE
- C: WORD PROCESSING
- D: DESKTOP PUBLISHING
- E: DATA BASE
- F: SPREADSHEET
- G: GRAPHING
- H: GRAPHICS/DRAWING
- I: GRAPHICS/CLIP ART
- J: ANIMATION
- K: VOICE OUTPUT
- L: COLOR
- M: MOUSE, JOY, TABLET
- N: MANAGEMENT
- O: COMMUNICATIONS
- P: TEACHER TOOLS

Title	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Publisher
A+	✓		✓					✓					✓	✓			SAVTEK
APPLEWORKS		✓	✓		✓	✓	GS		GS			GS	GS		GS		CLARIS
BANK STREET STORY STARTERS	✓	✓	✓					✓	✓	✓		✓	✓			✓	MINDSCAPE
BANK STREET WRITER	✓	✓	✓													✓	SCHOLASTIC
BANK STREET WITH E-MAIL		✓	✓										✓	✓	✓	✓	SCHOLASTIC
BEGINNING KEYBOARDING	✓	✓												✓			HOUGHTON MIFFLIN
BLAZING PADDLES		✓						✓	✓			✓	✓				BAUDVILLE
CHILDREN'S WRITING & PUBLISHING CENTER	✓	✓	✓	✓				✓	✓			✓	✓			✓	LEARNING CO.
COMPUTER LITERACY THROUGH APPLICATIONS	✓	✓	✓		✓	✓										✓	HOUGHTON MIFFLIN
COTTON TALES	✓	✓	✓	✓					✓								MINDPLAY
CREATE WITH GARFIELD	✓	✓	✓						✓			✓					DLM
DAZZLE DRAW		✓	✓					✓	✓			✓	✓				BRODERBUND
DESIGNASAURUS	✓	✓			✓			✓	✓			✓					BRITANNICA
DR. PETE'S TALK WRITER		✓	✓								✓					✓	HARTLEY
DRAW-IT	✓							✓	✓			✓					PAPERBACK
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EIGHT-IN-ONE	✓	✓	✓		✓	✓	✓								✓		SPINNAKER
EXPLORE-A-SCIENCE		✓	✓	✓	✓				✓	✓		✓	✓			✓	DC HEATH
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KIDS NETWORK		✓	✓		✓		✓					✓	✓	✓	✓	✓	NAT'L GEOGRAPHIC
KIDWRITER	✓	✓	✓						✓			✓					SPINNAKER
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MATHEMATICS COURSEWARE PROBLEM SOLVING		✓				✓				✓		✓				✓	MCGRAW HILL
MATH TALK & KID TALK & FRACTION TALK		✓	Kid								✓	✓	✓				FIRST BYTE
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MUPPET SLATE		✓	✓						✓			✓				✓	SUNBURST
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NEWSROOM	✓	✓	✓	✓				✓	✓			✓	✓				SPRINGBOARD
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PC FILE	✓				✓												BUTTONWARE
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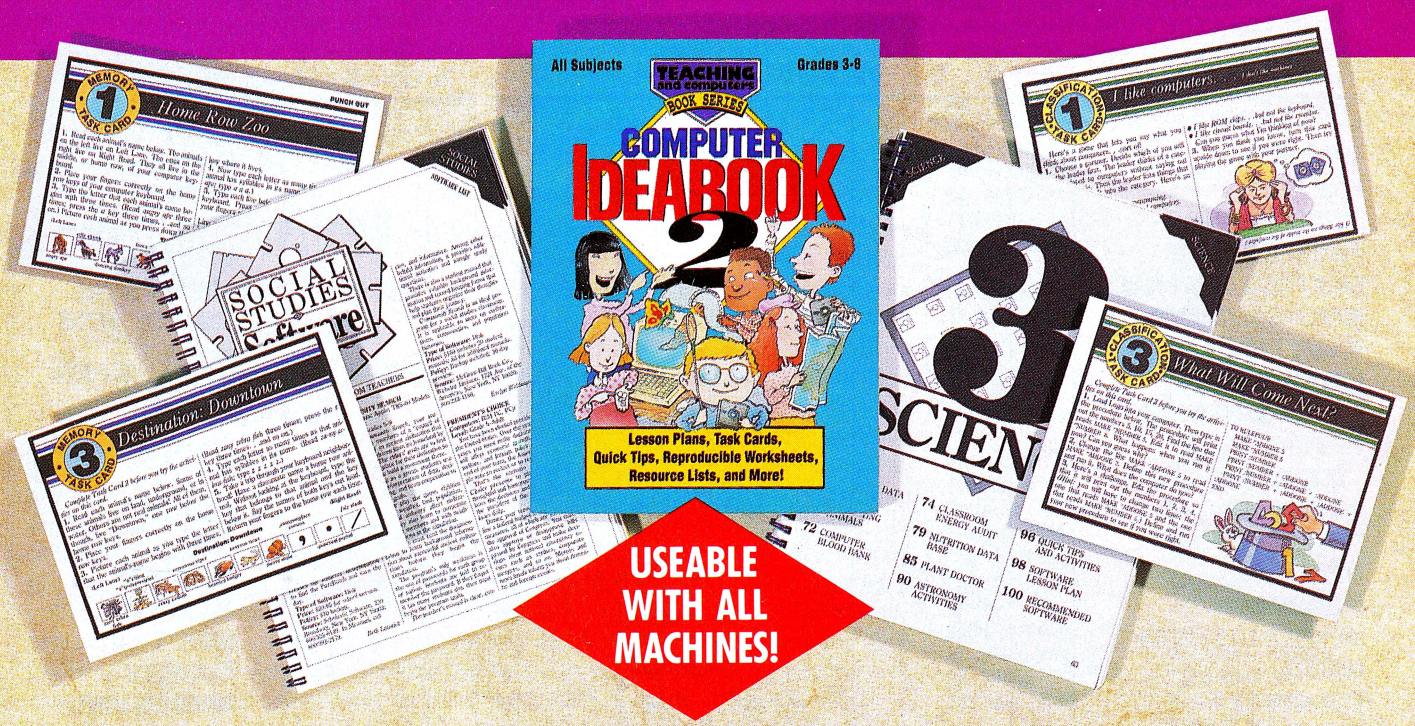

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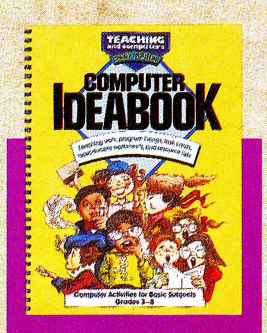

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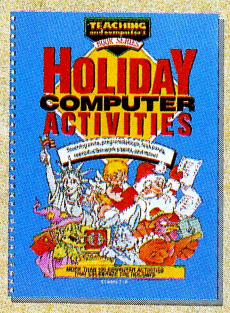

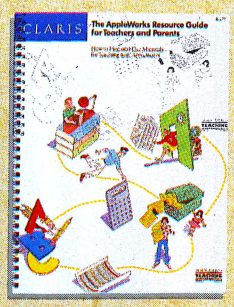

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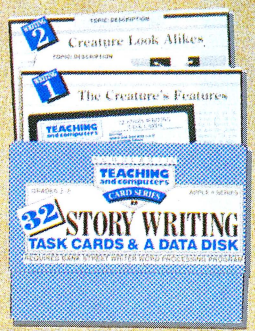

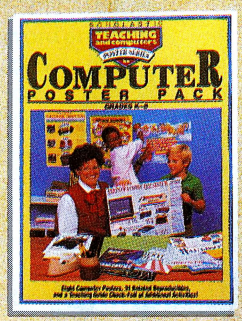

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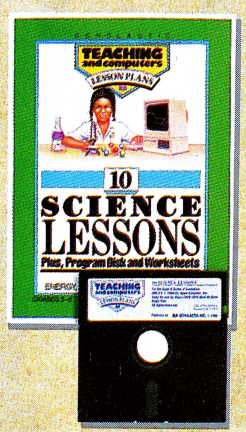

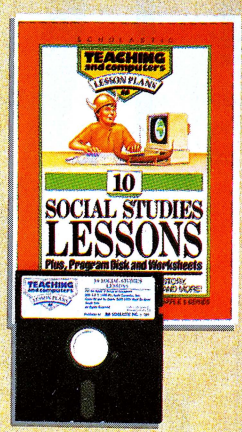

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BY
JANNEKE BOGYO

There's no disguising the fascination of this class cooperative learning computer project!

THE Mystery OF THE MASK

CONTENTS

RESEARCHING AND WRITING
30
MASK-MAKING
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ORAL REPORTS
32
ADAPTATIONS FOR YOUNGER AND SPECIAL NEEDS LEARNERS
42
RESOURCES
30
TYPE-IN WORKSHEETS
41

CURRICULUM CONNECTIONS

LANGUAGE ARTS

• • • •

Researching, writing, and presenting an oral report. Listening to learn.

SOCIAL STUDIES

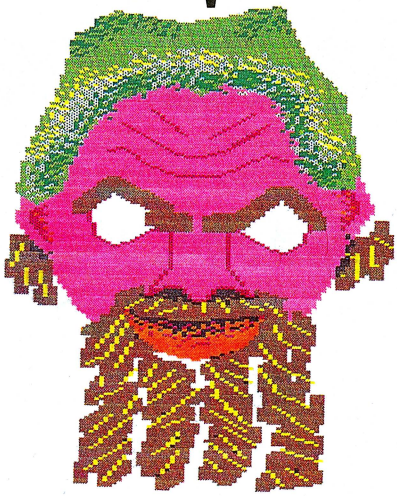
• • • •

Exploring other cultures through research and crafts.

ART

• • • •

Designing and creating original masks.



Masks have been used by many cultures throughout history for a variety of different reasons. Some of the oldest uses of masks were to invest the wearer with magical powers. Other early masks were shaped as animal heads and were used to disguise the hunter to make the hunt successful. Throughout the world, masks have evolved into important elements in cultural ceremonies. Even in modern times, masks are used in cultures for everything from curing the sick to costuming in theatrical productions to protective gear for automotive workers.

This class project will open your students' eyes to a cultural element that unites people as seemingly different as the North American Indians, the Chinese, and the Greeks. It will integrate language arts, social studies, and art, giving students an opportunity to practice research skills, creative design skills, oral presentation skills, and the often neglected skill of listening for information. Along the way, students will use some or all of the following computer applications: word processing, data base management, graphics, and desktop publishing. The strategy of cooperative learning is used throughout the project to enhance active participation by each student and to draw on students' enthusiasm for working together.

Although this project was designed for older elementary and middle school students of average ability, special adaptations are given on page 42 to make it an effective unit for younger students and learning disabled students as well. The teacher should determine how much research, writing, reporting, design, and computer use is appropriate for his or her class. Not every activity needs to be followed to make this project a useful one.

MATERIALS NEEDED

For this project, you will need a word processing program, a text data disk containing your type-in worksheets (to be prepared in advance), and blank formatted disks for student word processing use. Also needed are a data base program and graphics software such as *Dazzle Draw* (Broderbund) or *Paintworks Plus* (Mediagenic). If you have access to a desktop publishing program such as *The Newsroom* (Springboard or Scholastic) or the *Children's Writing and Publishing Center* (Learning Co.), you may want to use it for the first extension activity. In addition to this software, you will need a variety of art supplies such as construction paper, paint, paper plates, papier-mache, corn husks, material scraps, and anything else that will help students create an "authentic" mask.

PREPARATION

In preparation for this project, familiarize yourself with available resources on the subject of masks at your school and public library. (For a suggested bibliography, see "Resources" on page 30. Encyclopedias can also be used, but it is wise to encourage use of other sources.)

Find leads about as many different cultures as you want your students to study. For instance, if you plan to divide your class into ten small learning groups, be sure you are aware of ten cultures which these groups could study. Some suggested cultures are: Eastern Woodland Indians, Eskimos, early Greeks and Romans, Chinese, African cultures, Indians of the American West, Japanese, Australian, and South American Indians.

If you would prefer not to make library skills a component of this project, you'll want to physically place your chosen research resources in your classroom for student use.

As final preparation, you'll need to type in the worksheets on page 41, print out Worksheet A, and make enough copies for each student in your class to fill out one worksheet for each group presentation he or she will see.

STEP ONE

SETTING THE STAGE

Start your students on this project by asking them to associate as many words as they can with the word "mask." Don't be surprised if most students think only of Halloween characters. List the responses on the board or on a wallchart for use in Step Eight at the end of the project.

Next, discuss how masks have been used throughout history by many different cultures for a variety of reasons. Display pictures and maps from resource

Resources

Alkema, Chester Jay, *Masks*, Sterling Publishing, 1971.

Baylor, Byrd, *They Put on Masks*, Scribner, 1974.

Bruun-Rasmussen, Ole, *Masks*, Sterling Publishing, 1976.

Cummings, Richard, *101 Masks*, David McKay Co., 1968.

Gasciogne, Bamber, *World Theater*, Little Brown Co., 1968.

Hofsinde, Robert, *Indian Arts,* Morrow, 1971.

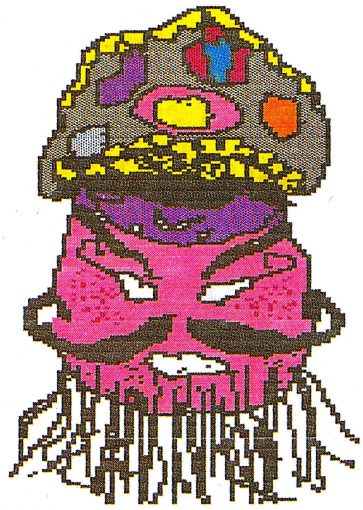
Hunt, W. Ben, *The Complete How-to Book of Indiancraft*, Collier-Macmillan, 1973.

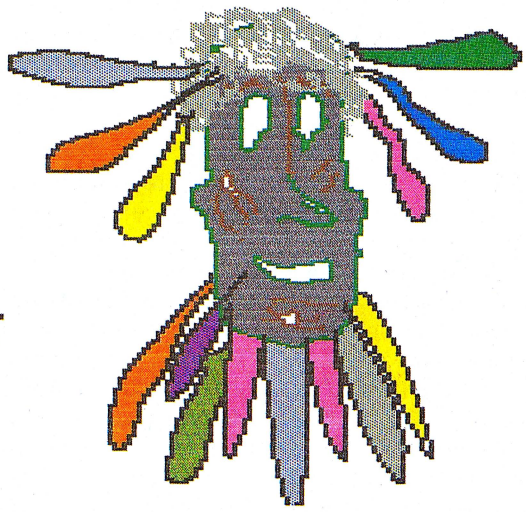
Mason, Bernard, *The Book of Indian Crafts and Costumes*, Ronald, 1946.

Parker, Arthur, *The Indian How Book*, Dover, 1975.

Ross, Laura, *Mask-making with Pantomime and Stories from American History*, Lothrop, 1975.

Thomas, Beverly Jane, *A Practical Approach to Costume Design and Construction*, Vol. II. Allyn & Bacon, 1982.





materials to help students associate the idea with some concrete examples. Be prepared to list cultures which students might use for their research.

STEP TWO

RESEARCHING THE MASKS

Divide students into cooperative learning groups of three or four students each–groups small enough to allow all students to be active participants. Assign or allow each group to choose a particular culture to research.

Tell the groups they will be responsible for developing a group research report which will include information about a culture, ways that masks were (and in some cases, still are) used in that culture, and the materials used to make the masks. They will ultimately be asked to create a mask appropriate to that culture by using a computer graphics program or other art materials. Finished products should reflect the styles and kinds of materials actually used in that culture.

Each member of a group should be assigned a specific task towards the completion of the group project. For example, a four-student team might try dividing the project into such individual assignments as: 1) Locate the culture on a world map and research its climate and environment; 2) Research how the masks were/are used in this culture; 3) Find examples of masks and note their features; 4) Research materials used to make masks.

Students should plan frequent discussions within their groups during the research process, to compare notes and fill information gaps.

STEP THREE

WRITING THE REPORTS

Once the research is completed, have the groups use a word processor to write up their reports. Be sure that each person in the group is assigned a task so that each remains actively involved with the project. For instance, in a three-student group, students could take turns dictating text, typing, and proofreading. Allow plenty of time for group editing.

If you're working with a limited number of computers, you can have some of the groups write their draft reports by hand while others use the computer.

STEP FOUR

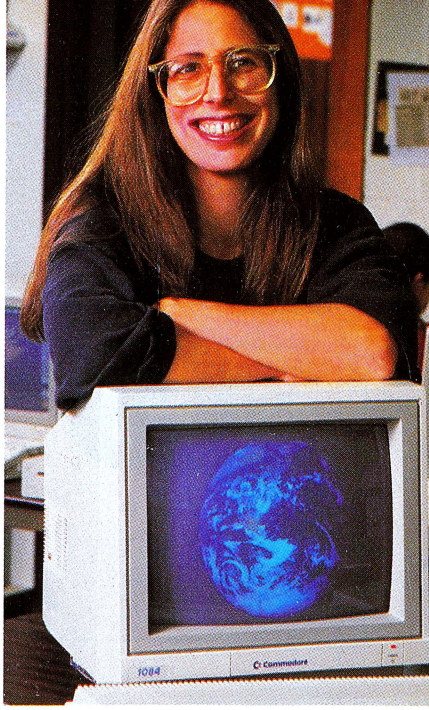
MAKING THE MASKS

This is the most creative part of the project. The objective of this step is to have the groups create their own masks which reflect the culture they studied. Encourage students not to copy a mask from a book, but rather design one as a group. Again, make sure that each member of a group has a particular task to accomplish, from sketching the group's design on paper to adding finishing touches.

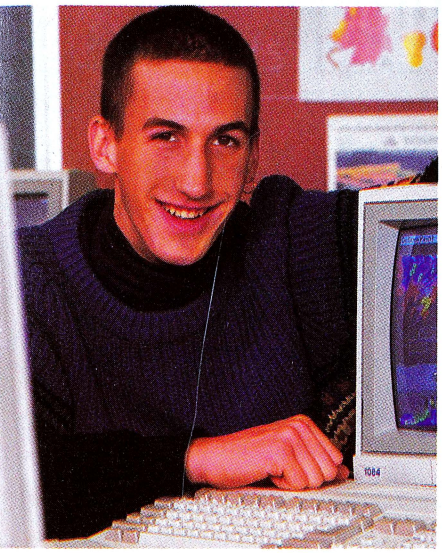
Students will need a variety of art supplies for this section in addition to

Dinah Fried, age 7½
Avante Garde Computer Artist

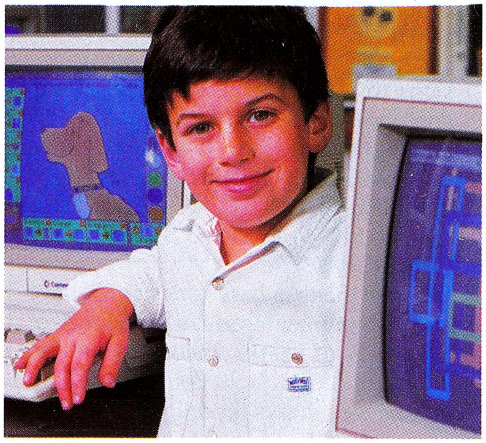
Matt Wagner, age 17
Music Video Producer



Lauren Weinger, age 32
Educator



Alex Clifton, age 17
Computer Graphic Designer



John Rudikoff, age 8
Animation Specialist

Anthony Valencia, age 13
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your computer and graphics software: for instance, crayons or markers for coloring-in computer printouts, construction paper, paper plates, clay, papier-mache, corn husks, and anything else that will allow students to create appropriate masks. It is important to provide enough materials so even students who say they aren't "artistic" will be able to create a mask.

STEP FIVE

PRESENTING THE REPORTS

Have each group prepare a brief oral report about the culture it studied and the mask it created. Each member of the group should script and present part of the material, with one or more students taking turns actually wearing the mask.

As each group gets ready to present its report, distribute Worksheet A to the students in the audience. The purpose of the worksheet is to give students a framework for "listening to learn" by taking notes and making observations. These notes will be used again with the data base portion of this project.

STEP SIX

CREATING A DATA BASE

In this portion of the mask project, students will use information they've gained so far to create a data base on masks. Hold one or more class discussions to guide students in determining appropriate fields for their data file, including headings from Worksheet A such as NAME OF CULTURE, LOCATION, TIME PERIOD, TYPE OF MASK, USE OF MASK, MATERIALS USED, and OTHER FACTS.

Once the data base is designed, have each group enter information about all of the kinds of masks encoutered in the course of its research. For instance, if a culture uses masks for religious ceremonies and for hunting, two records could be created to document the two different uses. As time allows, have groups research cultures not already studied by the class to add more records to their files.

Once students have entered their information into the data base, have them first test the file by searching for various masks listed in their worksheet notes. Then, students should SORT and SEARCH the file to discover patterns among the masks and cultures that they studied. Each group may also write one question which could be answered by using the data base information; collect and combine the questions and have students spend one computer session using the data base to answer them. Encourage students to try creating different report formats to determine which one is most suitable for which kinds of information.

STEP SEVEN

WRAPPING UP THE PROJECT

When all of the previous steps have been completed, take out the list of words that students made about masks in the beginning of the project. Ask them to make a new list of words that describe masks and their uses in society. This list will be a much more varied and accurate than the first. Ask students to analyze this new list and compare it with the old. How and why are they different? Finally, talk with students about how perceptions of other societies are formed. Discuss the importance of understanding the values and cultures of societies different than students' own.

EXTENSION ACTIVITIES

•Your students can use word processing or desktop publishing software to create a newsletter about all of the cultures and masks they've researched. Have each group follow the five W's— who, what, when, where, and why—to write an exciting, factual news story about its chosen culture and masks, then work as a class to combine these into a complete publication.

•Have your students close their eyes and imagine what the location and climate of the culture they are studying is like. Now, on a big wall map of the world, have students label the area where their researched culture is from. Students can use an index card to write a brief description of the culture and location as a label. After they label the areas, have them write up a description of the place for a travel book. Their descriptions can be written from fact and their imaginations.

•ESL (English as a Second Language) classrooms may want to have students research their own culture's customs and uses of masks. When they complete the research, have them share their findings with classmates. If your class is predominately made up of one culture, have groups research different masks within that culture.

•Music is a universal language. All cultures are influenced by it in some way. Ask your students to research the music used by the culture they studied. Have them look specifically for areas where music and masks are used together as part of a ceremony. Some students might want to act out the ceremony for the class.

Janneke Bogyo is the Computer Lab director for preK-6 at the Tuscarora Indian Reservation in Lewiston, N.Y. She is also an advisor for *Teaching and Computers.*

TYPE-IN WORKSHEET A

Type this worksheet onto a data disk using your word processor, print it out, and make copies for students to use as a framework for note-taking during the listening aspect of the oral report. (You may also want younger students to use this worksheet as a research guide.) It is best to double-space this worksheet to allow enough space for students' answers.

MASK REPORT

Group Members _____

Culture _____

Location _____

Time Period _____

Uses of Masks _____

Description of Masks _____

Materials Used _____

Other Interesting Facts _____

TYPE-IN WORKSHEET B

To guide younger students through the report-writing step of this project, type in and save the following paragraph on your data disk. Students should replace the * symbols with words or phrases from their research. Words in parentheses are for teacher information, but could be included for students as a guide.

MASK REPORT

The culture * (group members) studied was the * (name of culture). This culture is located * (location) which is on the continent of *. The people of this culture used masks for * (uses of masks). Most of their masks looked like * (description). They used * (materials) to make their masks. This culture made their masks in * (time period). Two other interesting facts about this culture are: 1) * and 2) *.

USING THIS PROJECT WITH YOUNGER STUDENTS

STEP ONE: You might want to stick to cultures only in North America, such as different Indian groups and Eskimos. This would limit the map work required, and the similarities of cultures will be easier for younger students to see.

STEP TWO: Have students use Worksheet A on page 41 to fill in as a guide during the research phase of the project.

STEP THREE: Type Worksheet B on page 41 onto a data disk using a word processor. Have each group copy this file on its own data disk as a "fill-in-the-blanks" guide for writing the research report.

STEP FIVE: Copy Worksheet A onto chart paper. As groups present their information, elicit responses from the whole class to fill in the chart.

STEP SIX: Provide lots of guidance to help student select field names for their data base. Then print out a blank data record and photocopy it for students to fill in by hand for you to check before they enter information into the data base. Hold a whole class demonstration of SEARCH and SORT before requiring students to use the data base for answering questions.

ADAPTING THIS PROJECT FOR SPECIAL NEEDS STUDENTS

BY NANCY BLEY

Students with learning disabilities can benefit tremendously from involvement in educational computing—if the computing activities are appropriately tailored to their needs. In this section in each issue of *Teaching and Computers,* you'll find definitions of key terms relating to students with learning disabilities, followed by strategies for adapting the class project for use with learning disabled students in your classroom.

DEFINITION OF TERMS

Expressive language: Students experience difficulty in this area as inability to "get the words out," even if they understand what response is expected from them.

Short-term memory: Students with memory problems may have understood what they read or heard, but have difficulty remembering more than just a few details.

Abstract reasoning: Students with this difficulty have trouble drawing conclusions and relating information. They tend to be very concrete, have trouble with idioms, and often miss the overall idea of the story.

Sequencing: Students with trouble in this area find it hard to arrange or plan actions, items, or ideas in logical order; they also have trouble deciding "what comes next" when faced with an open-ended course of action.

Organizational skills: Organizing one's thoughts and work involves the ability to plan ahead and a sense of one's position in space and time. Learning disabled students often have trouble in one or more of these areas and, consequently, find it hard to organize their time and priorities so that they can successfully complete their assigned tasks.

Visual discrimination: Students with visual discrimination problems tend to reverse their numbers and letters. When the print is too small or the lines too close together, it is especially hard for them to distinguish among letters.

Visual figure ground: Children with difficulties in this area often lose their place on a page, particularly if the print is too small.

ADAPTIVE STRATEGIES

Encouraging verbalization: Students with expressive language problems may be reluctant to participate actively in the word association part. Encourage participation by presenting a short group of words and asking students if they see any relationship between masks and any of the words on the list.

Prompting memory: Students with short-term memory problems may have trouble remembering or reading mask-associated vocabulary at a later time. Provide practice by incorporating the words into their daily spelling and writing, and by using concentration games. You can use flash cards for concentration, or try such computer games as *Square Pairs* (Scholastic) and *Spell-It* or *Word Attack* (Davidson).

Building on strengths: For learning disabled students to effectively participate in cooperative learning groups, it is important to tailor their group membership assignment and tasks to their learning strengths. Discuss with the class as a whole in advance what the various group and individual tasks should be, depending on the activity at hand. Once you've formed the groups, you may want to assist in making job assignments so that the student with learning disabilities is given tasks which will allow active and confident participation.

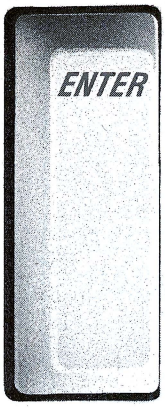
Making it familiar: When assigning cultures, remember that students with abstract reasoning difficulties may find it easier to learn about masks related to a familiar culture. Expecting them to learn about a whole new culture and a new use of masks may be too confusing.

Planning for research: To help students with sequencing or organizational problems successfully complete the research, set up a simplified outline that lists the steps they should follow. Give students practice in coping with this kind of disability by presenting the steps out of order and asking them to sequence them before beginning research. Go over students' sequencing and listen carefully to their logic. Adjust accordingly.

Accessing the resources: For those students who need research planning help, you may wish to color highlight or number your research resource materials to match their research steps. In this way, students with organizational and sequencing difficulties can attend to the more important task of integrating the information rather than being frustrated by the search.

Magnifying the text: Students with visual discimination or figure ground problems may have trouble reading research sources or using the word processor. If you have access to a copying machine that enlarges,"blow up" copies of the research material; otherwise, color highlight relevant sections or let students use a "window card" to read. Use a word processor that has a 20- or 40-column screen display option, or try to set the print options for output using fewer—and larger—characters per inch.

Nancy Bley is academic coordinator at the Park Century School in Los Angeles, Calif.



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entries to: Microsoft Contest, % Bill Morgan, Electronic Learning, 730 Broadway, New York, NY 10003

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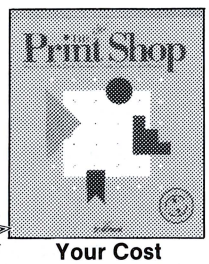

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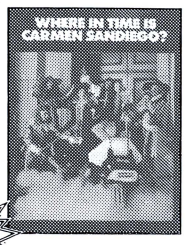

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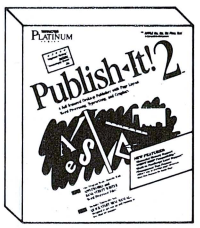

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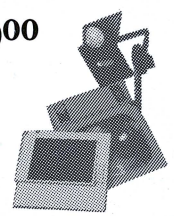

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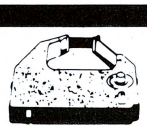

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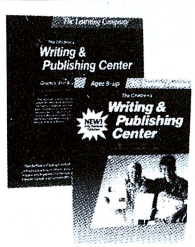

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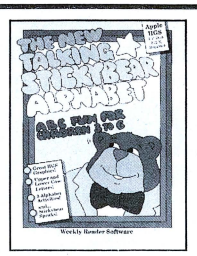

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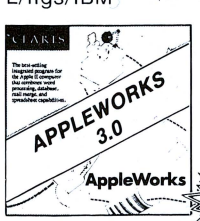

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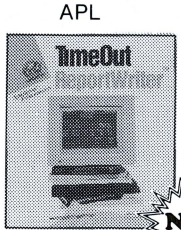

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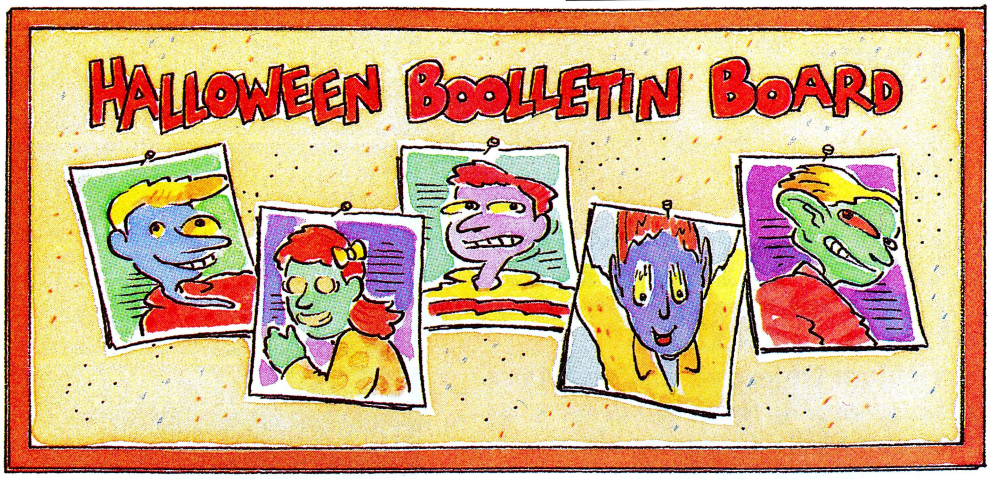


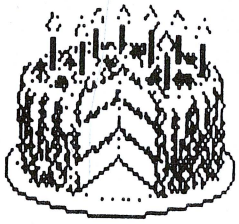
Philip Scheuer

Students get "spooked" with ComputerEyes.

CREATE DIGITIZED MONSTERS WITH A WINK AND A NOD

Set up a spooktacular Halloween "boolletin board" with digitized human faces. Start with a program like ComputerEyes *by Digital Vision, which lets you capture your students' video portraits on screen. But instead of having students sit still for their mug shots, let them experiment with slight movements, like the blink of an eye or a nod of the head. Now take a look at their creations. Children who once looked like angels have been transformed—into monsters!*

Jay Seller
Thornton High School
Aurora, CO



A HAPPY BIRTHDAY DATA BASE

Let your students shine for a month with this computerized birthday idea. Using a data base management program, I had my students type their NAME, MONTH OF BIRTH, and DAY OF BIRTH into a "Happy Birthdates of the Month" file. We then sorted the file by month and printed a monthly list with the birthday kids' names.

Next, we used a graphics program to create poster-style headings with a different design and print style each month.

Finally, we put each list and heading together to honor the birthday students for their whole month!

Margaret Rappe
Walt Disney Magnet School
Chicago, IL

GOOD GRAFFITI

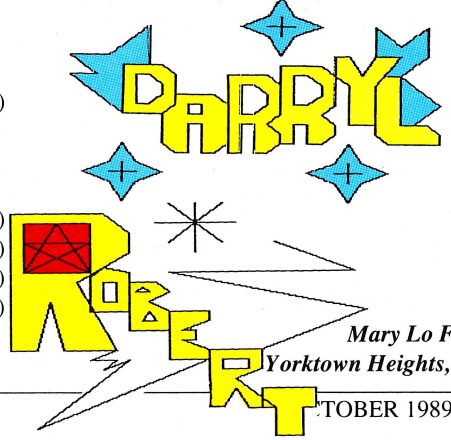
How many times have you walked past a desk or a locker, or picked up a book, and seen it covered with student graffiti? Here's a chance to get student artwork off of the places where it shouldn't be and onto the computer screen where it belongs!

Create a Logo program that draws the ever-popular bubble letters that students love to make. Have students get started by plotting their names on Logo graphic screen graph paper. Next, using the SETPOS Apple Logo command, have the students program their names (see the example for the letter "L" below). A driver procedure will connect the letter procedures and draw each name.

I watched as my students added their own personal touches to their names. They created stars, rainbows, hearts, flowers, and bolts of lightning to their program. Some even made 3-D images! When it was completed, I posted each student's work on a bulletin board.

Here are the instructions for creating the letter "L":

```
TO L
SETPC 3
PU
SETPOS (-80 70)
PD
SETPOS (-80 0)
SETPOS (-20 0)
SETPOS (-20 20)
SETPOS (-50 20)
SETPOS (-50 70)
SETPOS (-80 70)
FILL
END
```

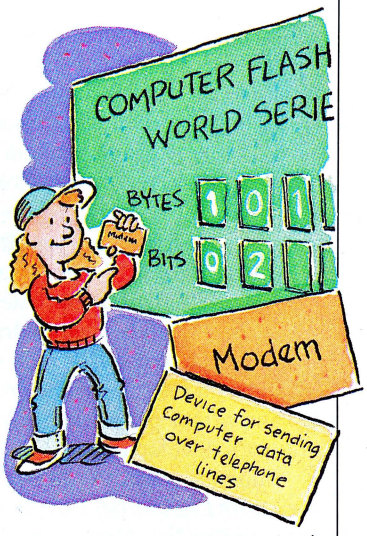


Mary Lo Faso
Yorktown Heights, NY

BATTER UP! COMPUTER BASEBALL SCORES A HOMERUN!

World Series fever is in the air. One great way to catch it is to host your own Computer Flashcard World Series!

It all starts with a stack of blank index cards. On one side of each index card, write a computer term or concept (such as a Logo procedure name, a word processing term, or a type of computer program); on the other side, write its definition.



After reviewing the terms, divide the class into two teams. As in baseball, each team gets three outs, or incorrect answers, per inning. You can even set up "bases" around the classroom for students to walk to after they get a "hit."

To play the game, the pitcher of each team calls out the flashcard term and the batter gives the definition. Each correct answer puts the batter on base. The team scores after the batter makes it to homeplate. Although there are no fouls, walks, doubles, triples, or homeruns, this program will quickly become the hometown favorite!

Sister Cynthia Fox, DC
St. Joseph School
Martinsberg, WV

ELECTRONIC LESSON PLANS

Computing in the Content Areas This Issue:

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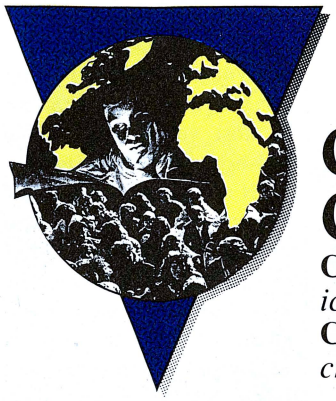
SOCIAL STUDIES



COMPUTE THE COLONIES

Curriculum Objective: *Studying America's original Thirteen Colonies*
Computer Skill: *Designing shapes and creating text with* LogoWriter

Colonial American history comes to life with this visually-oriented social studies lesson. Working in small groups, your students will apply research skills in collecting data on the Thirteen Colonies, and use computer skills to prepare a graphic presentation for an oral report.

With *LogoWriter* and the DRAWQUICK program listed on page 47, students will be able to draw an outline of each colony, stamp significant symbols on the screen, and create text to list important people and events in the colony's development.

Students who have previous experience with *LogoWriter* can jump right into the activities listed below. Beginners may need some guidance in using the program to draw and write about the colonies.

Materials Needed: You'll need *LogoWriter* (LCSI), 13 formatted data disks, at least 13 copies of the Colony Worksheet (page 47), and research resources on the Thirteen Colonies.

Preparation: Type in and save the DRAWQUICK program on individual *LogoWriter* data disks for each student team. Make sure that your students are comfortable using *LogoWriter* with DRAWQUICK, the Shapes Editor, and the word processing function.

Discussion: How many of your students can name the original Thirteen Colonies? Is your state one of them? Begin a discussion on colonial life. Who were the men and women that helped organize the newcomers? How did people live when they first arrived? Were the colonists happy? Afraid? These are important questions that will lead to an understanding of colonial America. Have students begin thinking about these questions and others as part of this lesson plan.

Activity: Divide your class into 13 pairs or small groups (depending on the number of students in your class). Explain that each group will be responsible for presenting an oral report on a colony, with an accompanying computer-generated visual aid.

Pass out the Colony Worksheet, and go over the colony shapes and questions with your class. As a group, make a list of the steps students need to follow to complete the worksheet and prepare the oral report.

Activity: In this activity, students will create a simple *LogoWriter* program to illustrate the colony they researched, along with symbols that represent major events, chief products, or other features of the colony. In addition, students will generate text to list important facts and to label the colony.

First, students should use *LogoWriter* and the DRAWQUICK program to draw colonies on the screen, following the colony shapes found on the Compute the Colonies worksheet.

Next, students can design symbols with the Shapes Editor. Here are some examples for symbols: New England Colonies—a church, pilgrim, the Mayflower; Middle Colonies—Quakers, farm implements; Southern Colonies—tobacco, cotton, plantations.

Students should use the STAMP command to make symbols inside or outside the outline of the colony, and then label the drawing using either the word processor or the LABEL command. Each team should then use the *LogoWriter* word processor function to list important colonial leaders, dates, and events on the screen. Finally, when the screen is ready for presentation, remind students to press <ESC> to save it.

Note: More advanced programmers can use *LogoWriter*'s select (OPEN-APPLE-1), cut (OPEN-APPLE-2), copy (OPEN-APPLE-3), and paste (OPEN-APPLE-4) keys to make their commands into procedures. Then their maps can be redrawn on the screen as their reports are given.

Activity: Have each student team decide within itself how to divide up the work of presenting the oral report. Set aside ample time for each group to make its report, display its visual aids, and answer questions from classmates.

Extension Activities: Once all 13 teams have presented their reports, try these lesson extenders.

•Challenge students to write a program so that each symbol in the display appears on the screen when a particular key is pressed.

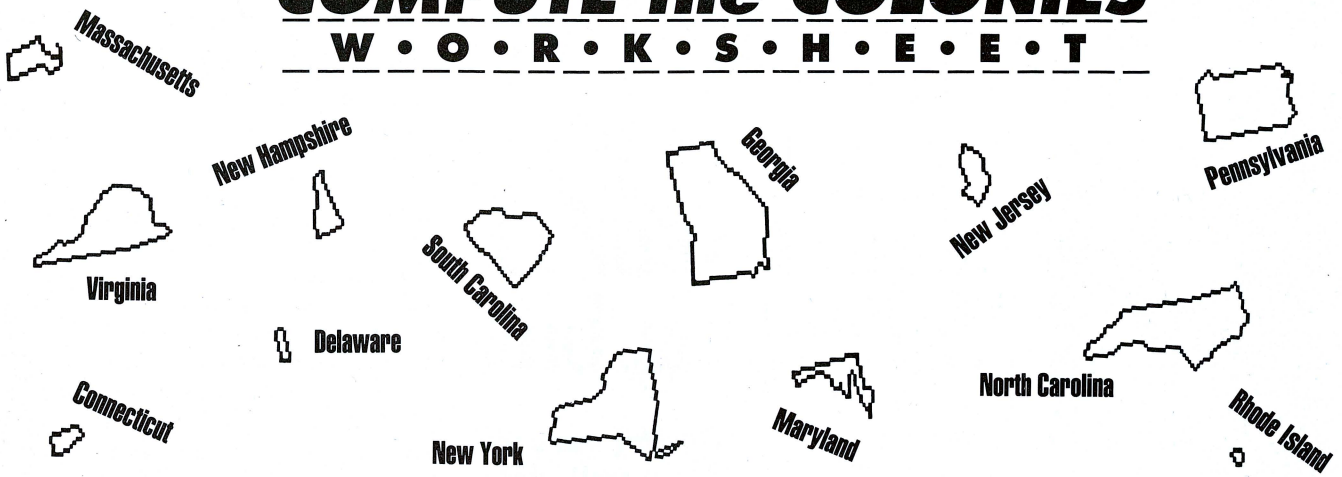
•Encourage students to create an interactive Compute the Colonies game to stump their classmates with. For example, students might challenge each other to choose the correct symbols to stamp on a drawing of each colony.

Dee Miller, Mike Charles, and Michael Muir
1988 Summer Logo Fellowship
University of Virginia

(Continued)

COMPUTE the COLONIES

W • O • R • K • S • H • E • E • T



C • O • L • O • N • Y R • E • S • E • A • R • C • H

Name of Colony _____

Important people:

Who? _____ **Why Important ?** _____

_____ _____

_____ _____

Important events:

What ? _____ **Year?** _____

_____ _____

_____ _____

Important places:

Town? _____ **Why Important?** _____

_____ _____

_____ _____

Important products and natural resources:

_____

_____

Using the DRAWQUICK program:
This is an instant draw program for *LogoWriter* which allows students to draw using these commands:

F— moves the turtle FD 10 steps
R—turns the turtle 10 degrees to the right
L—turns the turtle 10 degrees to the left
E—erases the last FD command
Q—quits the procedure

DRAWQUICK

Type in and save the following program on an individual LogoWriter *disk for each student team.*

```
to draw.quick
st cg
PU setpos [0 -60] PD
dq
end

to dq
make "input readlistcc
if :input = [q] [ht stop]
if member? :input
[[f][r][l][e]] [run :input]
dq
end

to Q
ht
end

to F
fd 18
end

to R
rt 10
endto L
lt 10
end

to E
px
bk 10
pd
end
```

SCIENCE

LEAF IT ALL TO FALL

Curriculum Objective: *Studying leaf types and forms*
Computer Skill: *Using a data base and word processor*

Take your students on a fall foliage walk. Open their eyes to the shapes, sizes, textures, and smells of autumn with a leaf collection. Then use this collection as the basis for a computer-assisted science lesson.

By the time the lesson is complete, your students will have gained valuable practice in the science process skill of examining every aspect of an organism before coming to a conclusion about it.

Materials Needed: You will need a data base management program and, for the extension activity, a word processor; a place to take a hike and collect leaves, and a bag or box to put them in; white construction paper, chart paper, crayons, wax paper, and an iron.

Discussion: Have a discussion with your class about leaves (reminding students that trees are not the only type of plants that have leaves).

First, talk with students about why leaves are important to people. For instance, leaves provide us with oxygen, which we must breathe to live. Leaves produce oxygen from the carbon dioxide that we exhale. In addition, leaves are an important food source for humans, not only directly (in the form of many vegetables), but also indirectly through the animals which we depend on for food.

Next, turn your students' attention to the variety and types of leaves. Ask them to contribute to a class chart by listing all the different qualities a leaf may possess, such as size, shape, and color. Add as many characteristics as your class can think of before looking at actual leaves.

Activity: Take your students on a nature walk. Have them collect an assortment of leaves. Remind them to look at each leaf and think about how it differs from the others.

Once the collection is complete, take it back to your classroom and ask your students to examine it. For this, you can either have students work independently or as a group. If they work independently, have them make a list at their desks of all the different things they observe about the leaves. If you work as a group, add on to the chart that was started in the beginning of this project. To help start their thought-wheels turning, tell students to close their eyes and smell and touch each leaf. What kind of odor does it have? Is it smooth or rough to the touch? Ask them to record what their senses perceive.

Activity: Ask all members of the class to discuss what they have discovered. As they talk about their findings, add to the chart or write on the board the categories that they come up with.

As a class, decide which categories are the most appropriate to put in a data base. For example, your data base might include fields such as:

COLOR:
SHAPE:
EDGE SHAPE:
TEXTURE:
SIZE:
LEAF PLAN:
FRAGRANCE:
PLANT TYPE:

It is important to be consistent when listing key words for a data base. Have your students agree on a list of key words before they start working on the computer. As a reminder to the students, you should write these words on chart paper and post them in a visible area. Some suggested key words for each category are:

COLOR: red, yellow, green
SHAPE: square, round, oval, triangular
EDGE SHAPE: jagged, rounded, smooth
TEXTURE: smooth, dull, waxy
SIZE: small, medium, large
LEAF PLAN: simple (one leaf per branch), compound (many leaves per branch)
FRAGRANCE: nutty, woody, fruity
PLANT TYPE: tree, bush, weed, flower

Once this list is agreed upon, have each student enter his or her data into the data base.

Activity: Challenge your students to sort the data base by leaf color. What conclusions do they arrive at? Ask them to verify their results through research. For instance, do all red leaves come from trees that produce sweet sap? Are weed leaves any color other than green? What role does the sun play in leaf color?

Have students sort each of the other categories to ask and answer similar questions. Then let them practice using the search function to find or match specific leaves from the collection in the data base.

Activity: Have students preserve their leaves by following these steps: Give each student two equal sized pieces of wax paper. Ask each student to select three or four leaves and arrange them on the paper; use the other piece of wax paper to cover them. Next, you or another adult can seal the leaves in the paper with a warm iron.

Activity: Have students transform their leaves into "etchings." To make a rubbing of the leaf pattern, place one leaf under a sheet of white paper. With a crayon, color lightly over the leaf (on top of the paper) to pick up the leaf pattern on the paper.

Extension Activity: Using a word processor, have students write poems about leaves and/or fall. Ask them to create a visual image using as many descriptive words as possible. Here is one example:

Leaf Recipe

Toss apple peel and oranges
and melon in a bowl,
mix them with the scrapings
from a purple cabbage hole,
throw a few tomatoes in,
— how about some peas?
Blend until the fall begins,
pour out colored leaves!

-Isabelle Bruder

Post the poem printouts along with several data reports, preserved leaves, and leaf etchings on your classroom bulletin board.

Louise C. Orlando
New York, NY

(Continued)

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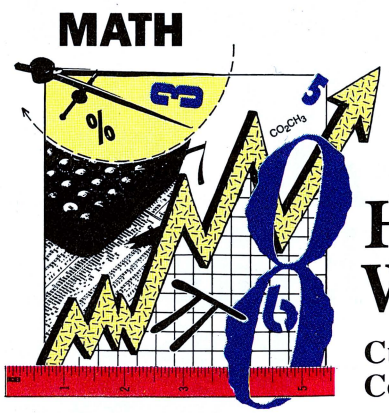

HALLOWEEN WAREHOUSE

Curriculum Objective: *Counting and organizing "inventory" items*
Computer Skill: *Using a simple spreadsheet*

Autumn winds are blowing and your students are thinking about Halloween. "What are you going to be?" is the big question this month. Why not use this enthusiasm to stretch math skills with a seasonal spreadsheet activity?

This lesson plan will give students practice in using spreadsheets while managing an imaginary Halloween costume warehouse. Students will be organizing the warehouse, ordering supplies, taking customer orders, and distributing goods. You will serve as chief salesperson for the warehouse and filter costume orders to them.

Materials Needed: You will need a spreadsheet program that your students are comfortable using, a printer, and a graphics program and/or art supplies to create illustrations of the warehouse inventory. You may also want to create an enlarged copy or overhead of the sample spreadsheet template on page 51.

Discussion: Before students begin this activity, they should have a working knowledge of spreadsheets. Take time now to review such terms as *rows, cells, labels,* and *formulas,* and make sure your students are able to comfortably manipulate your spreadsheet program.

Explain to students that spreadsheets are a perfect organizational tool for any business. With this spreadsheet lesson, they will be in charge of a costume warehouse business for the month of October.

Activity: Your class enters the imaginary costume warehouse and discovers that the last group in charge of the warehouse left it a mess. Not only did they forget to order more costume supplies, but they didn't take an inventory of what was left in the warehouse! So it's up to your students to straighten the place up and get those costumes moving.

As a first step, students will need to decide what costume supplies they have on hand and what additional supplies are needed. As a class, make a list of all the imaginary costumes and their parts (see sample spreadsheet on page 51 for ideas). You may want to limit students to no more than 10 whole costumes and five miscellaneous costume parts.

Next, work with students to arrange all of this information in an inventory and customer order spreadsheet modeled after the sample. The sample spreadsheet is broken down into four columns. The first gives the costume and what parts may be needed for it. The second column is for morning inventory, the third for customer orders, and the last column is for the end-of-the-day inventory. To find the end-of-the-day inventory, students will use a basic subtraction formula, subtracting the customer orders from the morning inventory to get the final inventory. As they explore their imaginary warehouse, have students enter morning inventory figures for each costume part. Remind your students to save their spreadsheet design to disk under a basic file name (such as WAREHOUSE).

More advanced spreadsheet users could also add cells for totaling the merchandise they ordered for the warehouse, for sizes and colors, for individual orders and pick-up, and for the grand total number of orders.

In addition to the spreadsheet, students may want to use a graphics program and/or art supplies to illustrate the different costumes and costume pieces in their warehouse. Have students post these in the computer corner.

Activity: Once they have a complete warehouse inventory in spreadsheet form, your students will be ready for business.

Divide your students into five groups. Each group will be in charge of "processing" orders and revising the spreadsheet for one day of the week. Each group should type its group number (such as 1, 2, 3, 4, or 5) in the appropriate cell at the top right of the spreadsheeet. At the end of each day, the group working on the lesson plan will save the spreadsheet under a modified filename (such as WAREHOUSE1, WAREHOUSE2, and so on) and make a printout. The next day's group will use this printout to modify its morning inventory figures before beginning business.

On the first day, have students in Group 1 start taking orders from their imaginary customers, filtered through you. (Customer order forms can be made by reproducing the A column of the spreadsheet on your word processor, then printing it out and photocopying it.) Orders can be generated by you or by the other students in your class. Since you are acting as chief salesperson, start the flow of orders out slowly—after all, it is only the first week in October. Send through some orders for entire costumes and others for parts of costumes, like a red nose or funny glasses. Repeat these procedures for Groups 2 through 5, gradually increasing the volume of business as each day passes.

At the end of this first week of business, make photocopies of each group's spreadsheet printouts for class discussion. Students should analyze what items are selling out quickly and need to be replaced, and which are moving slowly.

Activity: Whiskers, bow ties, and floppy ears! That's all people have asked for since Floppy the Rabbit made his movie debut—nine days before Halloween! Without proper planning, your warehouse could be in trouble. Have your students examine and revise their end of the first week spreadsheet to handle this

unexpected crunch. What extra items must they order? Remind students to printout and/or save each revised spreadsheet under a new file name.

Have students help you think up several other wacky alternative scenarios to stretch their inventory management and spreadsheet skills. For instance, what if it snowed three days before Halloween? What do you do with all the dragonfly costumes that students return because it's too cold to wear them?

Activity: Your students won't want to leave the warehouse as they found it! At the end of the month, have them review the spreadsheet printouts again and restock the warehouse with appropriate supplies.

Louise C. Orlando
New York , NY

(Continued)

	A	B	C	D	
1			HALLOWEEN	WAREHOUSE	
2	GROUP NO.				
3					
4		MORNING	CUSTOMER	END OF DAY	
5		INVENTORY	ORDERS	INVENTORY	
6		X	Y	X-Y	
7	TURTLE				
8	shell				
9	fins				
10	tail				
11					
12	SUPERHERO				
13	tights				
14	cape				
15	goggles				
16					
17	TIGER				
18	claws				
19	teeth				
20	fake fur				
21	tail				
22					
23	CHEF				
24	white hat				
25	white smock				
26	spoon				
27					
28	MISC.				
29	funny glasses				
30	red nose				
31	bird feet				
32	raincoat				
33	bow tie				
34					

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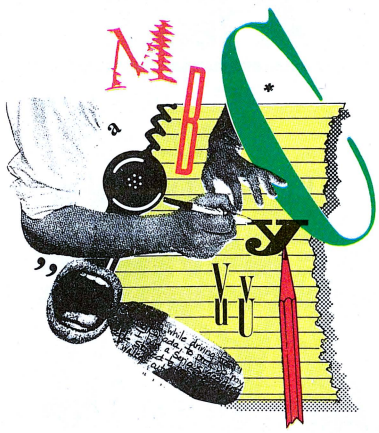

LANGUAGE ARTS

MONSTROUS MYTHS AND LEGENDS

Curriculum Objective: *Understanding myths and legends*
Computer Skill: *Using word processing, data bases, graphics, and Logo*

It's the time of year when thoughts turn to things that are mysterious, shadowy, and slightly frightening! Students of all ages love to listen to and tell stories about legendary and mythical creatures. This lesson plan will help students expand their word processing, data base, graphics and/or Logo skills while exploring myths and legends.

Materials Needed: You will need a graphics or Logo program, word processing software, and a data base program, as well as a variety of resource books about myths and legends (see next page).

Preparation: Students should be familar with the software before beginning. They should also know how to find information in a library.

Discussion: Start out by writing the words "myths" and "legends" on your chalkboard. Work with your students to come up with an acceptable definition for each. You may wish to focus on the origin of myths as a way to explain natural phenomena or other unique events, and on legends as popular retellings of events from relatively recent history.

Next, discuss the fact that many interesting and unusual creatures exist in myths and legends. Ask your students to think of as many creatures from myths and legends as they can, including any of local interest.

Activity: Read the myth "Theseus and the Minotaur" to your students. Divide your class into small groups, and assign each group to use the library to research mazes and labyrinths. Have students make sketches of any maze designs they encounter in their research. Then have each group create its own original maze on the computer using a Logo or graphics program. Let students challenge each other to find their way through the mazes.

Activity: Using a word processor, let students write their own myths. The following are sample myth topics:

- Why are the winters in New England cold and snowy?
- Why do frogs jump?
- What caused the Appalachian Mountains to rise above the land?
- What makes a cat purr?
- What causes the volcanoes in Hawaii to erupt?

Compile the myths into a class anthology and encourage your students and parents to read them together.

Activity: Read an account of the Loch Ness Monster, nicknamed Nessie. (Loch Ness is a deep lake located in northern Scotland that is believed to be the home of this mysterious creature.) Every year, tell students, more and more people claim they have seen Nessie, yet no one can agree on a description.

On chart paper, make a list of legendary creatures with your students. Creatures you may want to include are: Medusa, Sphinx, unicorn, Cyclops, Sasquatch, Minotaur, and Gorgon. To-

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Circle 11 on Product Information Card.

gether with the class, think of all of the categories of information you might need to describe each of these creatures, such as SIZE, COLOR, SHAPE, APPENDAGES, DIET, and HABITS. Using a data base management program, set up a data file using these categories as data fields; also include a field called NAME.

Next, have each student choose one creature to research. Have students record all descriptive information except the creature's name in the data base. Assign students to scroll through the data base to guess creatures' names, and to sort and search the records to find common patterns among creatures.

Activity: Using the information from the data base, have each student create a "Wanted" poster for his or her legendary creature. Have students combine computer graphics with hand drawings and text to make the posters creative and humorous. Display the completed posters around the classroom.

Activity: After a thorough study of myths and legendary creatures, students should have formed many opinions about what they have seen, heard, and learned. Divide the room into a "yes" side and a "no" side. When each of the statements below is read, students must choose to stand on one side or the other (no one is allowed to be neutral). You may want to ask each to justify his or her choice.

- Creatures such as Big Foot, Yeti, and the Abominable Snowman were created by a vivid imagination.
- Searches for such creatures are exciting and should continue.
- Photographs of Nessie and Big Foot were made by "con" artists.
- If so many knowledgeable people believe in these legendary creatures, there must be some chance that they exist.

Finally, write this quote by John M. Brown on your chalkboard: "Even when the facts are available, most people seem to prefer the legend and refuse to believe the truth when it in any way dislodges the myth." Do your students agree with this? Why or why not? What reasons can they think of for the power of myths and legends?

Resources

D'Aulaire's Book of Greek Myths by Edgar and Ingri D'Aulaire.

The Encyclopedia of Legendary Creatures.

The First Book of Mythology by Kathleen Eglin.

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COMPUTER CHALLENGES FOR KIDS

COLUMBUS CORRESPONDENCE

October is the month in which Christopher Columbus finally sighted the New World (which he thought was India) in 1492. Challenge your students to take their imaginations back in time to write letters to and from Columbus at various points in his journey into "Terra Incognita." Have students take turns booting up your word processing program and typing in two-to-three paragraph letters (with appropriate dates and salutations) to and from such possible correspondents as Queen Isabella, King Ferdinand, Columbus' mother, and the families of Columbus' crew members. The letters can be silly or serious—but they should convey a sense of history!

Circle 12 on Product Information Card.

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CREATIVE COMPUTING STUDIO

Task Cards Series for Creative Thinking Skills

BY THOMAS E. BOUDROT

Making the Most of Word Play

Unless you've never watched television, you know how to spell "r-e-l-i-e-f"! Makers of a popular antacid focus their commercial on a simple word association—the product will bring you fast relief. You can bet your students are "tuned-in" to the commercial and the subtle humor it uses. Kids delight in word games.

Noting humor in words isn't just an enjoyable pastime. When children see the similarities and differences in words and concepts, they're actively analyzing relationships. To be successful—and to see hidden humor—children rely on past experiences and analytical skills to see unusual relations in words and concepts. The more kids play creatively with subtleties in words, the stronger their analytical abilities will become.

ALL ABOUT WORD ASSOCIATION

Listen to kids talk. They're constantly comparing one thing to another. I recall one instance when a child said her raincoat was just like an alligator! And, come to find out—it was. She associated the pebbled texture of her purple slicker with the texture of an alligator's hide. Her association wasn't complete (the raincoat wasn't like an alligator—it was the texture that was similar to the hide of an alligator), but she was able to communicate her idea using associations.

Using similes (comparing things using the words "like" and "as") is only one technique children use to make associations. Kids love to invent sounds that describe events or actions. Though most kids use common onomatopoetic words like *crash*, *buzz*, and *zap* to describe sounds, they're just as likely to make-up unusual and original "sound-words" to describe all sorts of happenings. They also delight in "r-e-l-i-e-f"-style word play and in dreaming up whole families of associated words.

The "creative keys" contained in this issue's task cards will help children to exercise their ability to make associations between words and concepts. Since association-building can be individualized and creative, all you have to do is introduce your students to a few ideas—and let them do the rest!

MATERIALS NEEDED

You'll need at least one computer and printer with plenty of computer paper; a copy of *Print Shop* (Broderbund), *Super-Print* (Scholastic), or any other print program that makes posters; the four Word Play Task Cards on pages 55 and 56; and teacher-made samples to go with the Task Cards (optional).

PREPARATION

1. Study your classroom printing software to be sure it creates single page, 8-1/2-x 11-inch posters, sometimes called signs. It should include a variety of fonts (letter typefaces), borders, and graphics.

2. Cut out and laminate the Task Cards on pages 55 and 56.

3. You may want to create samples to go along with the Task Cards. To do this, use your printing program to generate posters just like the ones suggested on each Task Card.

4. Teach your students how to create a poster using the printing software. Be sure they know how to select borders, select and place graphics, select fonts and input words. (Make sure your students understand that using smaller fonts allow them to get more words on a poster.)

5. Be sure students know how to edit words (add, delete, change) while making a poster. Some printing programs use special control keys.

6. If you have additional graphic disks, use them. If not—don't worry. Each activity will work with the standard disks supplied with the original printing program.

PRE-TASK CARD ACTIVITIES

• Ask your students "Why is an airplane like a bird?" (Of course, planes and birds both fly.) Then present a more complex simile: "When is a person like a refrigerator?" (With some thinking, likenesses using "cold," "running," and "always eating food" come to mind). Have students write down a few associations about objects in the classroom using "like" or "as." Then compare the similes. Point out that individuals see things differently and draw from past experiences to describe things.

• Draw a balloon on the chalkboard or overhead projector. Without saying a word, take a sharp object and touch it to the drawing. How many children said "pop"? Now, tell the class that the balloon is filled with rocks and you're going to drop it. Would "pop" be the best sound to describe its action? How about "crash" or "thud"? Tell them that words that describe the sounds are called *onomatopoeia*. How many sound-words can they think of? (CAUTION: It's going to get noisy!)

• Ask your students, "What are synonyms?" (Words with the same meaning.) Next, ask "What is a synonym for dog?" (Pooch, puppy, pup, rover.) Now, tell your students that you're going to change the rules a bit. Ask, "What is a three-letter synonym for mousetrap?" After they ponder for a bit, tell them your synonym is "C-A-T"! Do they see the connection? Try a few more, such as "Spell pizza in three letters" (Y-U-M), or "Spell intelligent in two letters" (M-E!).

POST-TASK CARD ACTIVITIES

• *Un-Simile!* Kids are great with similes, but can they see associations in "unsimiles"? Give your students some situations where one object may be unlike another. Try some of these:

When is a baby unlike a human?
When is a computer unlike a tool?
When is a pencil unlike a pen?
When is a cat unlike a dog?

• *Story Sounds Abound.* Find storybook/tape combinations in your library. Look for shorter ones designed for primary-age students. (Some I've used include *Make Way for Ducklings* and the *Curious George* series). Have groups of students listen to the tape with the book closed. How many sound-words are in the story? Have students write down each onomatopoeia and then check their work by looking through the book. Are there any sound-words on the tape that do not appear in print?

Tom Boudrot is an independent education consultant based at the University of Southern Missippi.

WORD PLAY

SIMILE STUMPERS

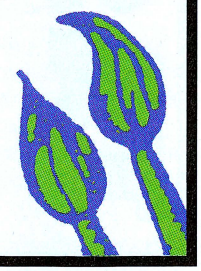
TASK 1

When is an art project like a good meal? Only when it's finished—or that's what Monartista says! Mona (that's her nickname) has all sorts of silly sayings that she thinks up with her art students. They especially like riddles made from similes. (A simile is a sentence that compares two things using "like" or "as.") Why not try making some of your own?

1. Look at some of the similes Mona's students have made. Get an idea how a simile riddle is made. Then, think up a simile riddle of your own.
2. Load your printing program into the computer. Select the poster (or sign) option from the menu.
3. Add a border to your poster. Then pick a font (letter type). Type your simile riddle. Don't type the answer on the poster.
4. If there's a graphic that goes with your riddle, add it to the poster.
5. Print your poster. Write the answer to the riddle on the back. You may want to color it before you hang it up.

SIMILE RIDDLES

When is a person like a refrigerator?
(When the person is real cool!)
When is newspaper like a can of paint?
(When it's red / read!)



WORD PLAY

MAGIC SPELLS

TASK 1

Monartista loves word games. Here's her latest game—she calls it "Magic Spells." See if you can guess the answer!

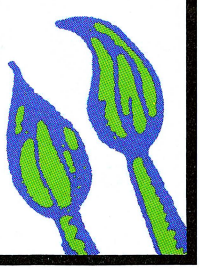
Question: What has three letters and means Mona's studio?
Answer: F-U-N!

See if you can beat Mona at her own game. Think up a magic spell—and see if it works!

1. Look at some of the magic spells to the right. Once you have the idea, make up a magic spell of your own.
2. Load your printing program into the computer. Select the poster (or sign) option from the menu.
3. Add a border to your poster. Then pick a font (letter type). Type your magic spell. Don't type the answer on the poster.
4. If there's a graphic that goes with your magic spell, add it to the poster.
5. Print your poster. Write the answer on the back. You may want to color it before you hang it up.

MAGIC SPELLS

What has three letters and spells mousetrap?
C-A-T
What has three letters and spells baby chick?
E-G-G



WORD PLAY

TASK 3 FAMILY FUN

CREATIVE COMPUTING STUDIO

Mona loves thinking about words that go with other words. She calls these "word families." Today, Mona's having trouble putting her word families together. See if you can give her a hand.

1. Load your printing program into the computer. Select the poster (or sign) option from the menu.
2. Pick one of Mona's ideas from the box. Think about words that go with the one you picked (for example, horses, dogs, and kittens go with ANIMALS).
3. Make a poster. Add a border to it. Then pick a font (letter type) to type your word.
4. See if you can type in ten more words that go with your first word.
5. Print your poster. Color around the words and add pictures that describe some of them.

MONA'S IDEAS

ANIMALS
FLOWERS
HOLIDAYS
SEASHORE
AIRPLANES
OUTER SPACE

WORD PLAY

TASK 4 SOUND ART

CREATIVE COMPUTING STUDIO

Can you imagine what Monartista did when a big jar of purple paint fell from the shelf? She didn't get mad—she created a new art project!

Mona heard the *splat* of the paint and got to work. Her project looked something like this:

Now all the kids in her studio are creating sound art too. They love it! So, why are you waiting?

1. Load your printing program into the computer. Select the poster (or sign) option from the menu.

SOUND WORDS

SPLAT . BOING . **CRASH** . QUACK . *WHALLUP* . BANG . CRACK . SNAP . **ZAP**

2. Think of a sound word. You can use some of Mona's favorites above if you cannot think of one.
3. Create a simple poster. Add a border to your poster. Then pick a font (letter type). Type your sound word.
4. If there's a graphic that goes with your sound word, add it to the poster.
5. Print your poster. Add action to your poster using crayons, markers, or coloring pencils. Check Mona's sample if you need an idea.

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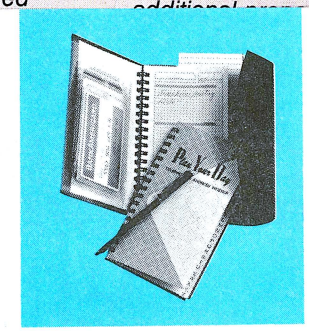

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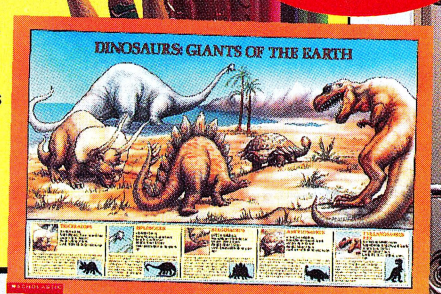
*Included in the 77-page count.



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WORD PLAY

TASK 3

FAMILY FUN

Mona loves thinking about words that go with other words. She calls these "word families." Today, Mona's having trouble putting her word families together. See if you can give her a hand.

1. Load your printing program into the computer. Select the poster (or sign) option from the menu.
2. Pick one of Mona's ideas from the box. Think about words that go with the one you picked (for example, horses, dogs, and kittens go with ANIMALS).
3. Make a poster. Add a border to it. Then pick a font (letter type) to type your word.
4. See if you can type in ten more words that go with your first word.
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CREATIVE COMPUTING STUDIO

MONA'S IDEAS

ANIMALS
FLOWERS
HOLIDAYS
SEASHORE
AIRPLANES

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WORD PLAY

TASK 4

SOUND

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Mona heard the *splat* of the paint and go work. Her project looked something like th

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BY TRISHA AINSA, PH.D.

Computing the Holidays

The classroom computer can be an exciting tool for helping children learn through celebrating each season's holidays. Computer-generated holiday room decorations, individual and group art projects, and take-home surprises are just the ticket for actively growing preschoolers, kindergartners, or primary level children who are eager to learn concepts, but have a strong need to move their bodies and use all of their senses in the learning process. Computer holiday activities can involve children in sensory experiences that develop motor, cognitive, and social skills.

YOUR HOLIDAY COMPUTING STATION

To take advantage of the lesson plans that follow, transform your computer corner into a holiday computing center. Make sure there is enough space around the computer for two to four children to work at the same time. You'll need a printer nearby for turning out the posters and banners that will decorate the room, as well as the costumes and crafts your students will create. Decorate the center with holiday art and vocabulary words. Be sure and have lots of printer paper on hand, including festive colored paper if possible.

Since many of your holiday craft activities will involve cutting, pasting, gluing, and other art processes, you'll want to set up an area linked to the computer center but not too close to it for children to handle potentially computer-gumming materials. Stock this center with lots of cardboard, crayons and markers, scissors, glue, tape, wrapping paper, and decorative material of your choosing. Post computer care rules (such as, "No glitter near the disk drives!") prominently, and make sure your students understand them.

SOFTWARE RESOURCES

Bulletin Board Maker (Pelican/Learning Lab). The combination of this package and *SuperPrint* will be a boon to your classroom decor. Try "Seasonal and Holiday Graphics," and "International Neighbors" for holidays of other countries. Apple II family, $24.95.

The Print Shop (Broderbund). A perennial favorite for creating signs, greeting cards, banners, and more. Now works with extensive library of additional clip art disks. Apple II family, Commodore, MS-DOS, Macintosh, $44.95 to $59.95, depending on machine.

PrintMaster Plus (Unison World). Brings clip art, fonts, signs, banners, and such to the MS-DOS world. Also comes in an Apple II version. $39.95 to $59.95, depending on machine.

SuperPrint (Scholastic). Makes 55-inch posters as well as banners, moving clip art, signs, cards, stationery, borders, and wall-sized calendars. Can also be used with other graphics programs, such as *Monstrous Monsters*, below. Apple and MS-DOS, $59.95.

The Super Sign Maker (Sunburst). Giant banners for holidays can be made with a choice of special borders and outline letters for students to color. Provides on-screen preview to view the sign before printing. Apple, MS-DOS, $65 to $75, depending on machine.

The Pelican Family Clip Art Album (Pelican/Learning Lab). This program also works with *SuperPrint* to create posters and wall-sized signs. The category of "Holiday Havoc" can be used with the lesson plans on page 60 and throughout the year. Apple II family, $24.95.

Monstrous Monsters (Pelican/Learning Lab). This program can be used with *SuperPrint* to create large creature posters with over one hundred cute and creepy clip art selections. Apple II family, $24.95.

Monsters and Make-Believe (Pelican/Learning Lab). Magical characters, monsters, and a full screen text processor help children write monster myths to accompany monster creations. Prints in five sizes. Apple II, MS-DOS, IBM/PCjr, Macintosh, $39.95.

Talking Monsters (Pelican/Learning Lab). This program adds speech to *Monsters and Make-Believe*. Using an Echo II or Cricket Speech synthesizer, the computer can "read" stories or text back to young writers. Apple II (128K), $49.95.

Story Starters: Social Studies (Pelican/Learning Lab). Provides graphics for creative writing skills; especially abundant in Thanksgiving graphic choices. Apple II family, $39.95.

The Toy Shop (Broderbund). Children can create a total of 20 toys and mechanize them with the teacher's help. By adding creative patterns, graphics, and text, the toys can be customized. Apple, MS-DOS, Commodore $39.95 to $49.95, depending on machine.

SOFTWARE PUBLISHERS

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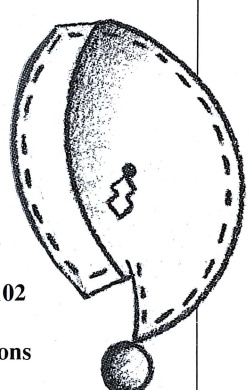

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PRIMARY LESSON PLANS

Turn Halloween, Thanksgiving, and Christmas/Chanukah into computer-enriched learning experiences with these celebratory lesson activities.

THE HALLOWEEN HOLIDAY CENTER

In this part of the lesson, the holiday computing center will be used to decorate the classroom, make masks, and dispense trick-or-treat goodies.

Materials Needed: For these activities, you'll need a graphics program plus *Bulletin Board Maker, Monstrous Monsters,* and *Talking Monsters,* as available. Make sure that the center has plenty of printer paper, markers, and black construction paper. For the monster and mask activities, you will need crayons, scissors, tape, pencils, rulers, dowels, and decorative materials such as glitter and paints. For the trick-or-treat activity, you'll need lots of nutritious bite-sized treats (such as fruit and nuts), plus one black and one orange bag to hold them.

Warm-Up Activity: Set the scene for Halloween with classroom decorations you and the children create on computer. For example, you and your students might use *Bulletin Board Maker*'s "Trick or Treat" selection to make a poster showing mice celebrating inside jack-o'-lanterns. Or you can create seasonal graphics, lettering, and borders using *Print Shop, PrintMaster Plus, SuperPrint,* or *Super Sign Maker.* Let the children color the printouts before they are hung on the bulletin board or another suitable place in the room.

Activity: In this activity, all of the "little monsters" in your class will create "Monster Self-Portraits" to hang up around the room. Using *Monstrous Monsters* and *SuperPrint,* each child can create a four foot tall monster to represent himself or herself. The double-sided *Monstrous Monsters* disk contains many creatures waiting for your young Dr. Frankensteins to bring them to life. The creepy clip art can be combined with *SuperPrint* graphics to decorate and personalize each monster. (If you don't have these two programs, help your students assemble their basic monster self-portraits from another printing program's sign and banner printouts.) When the monsters have been printed out, the children will need paints, markers or crayons, glitter, beads, material scraps, and anything else that you can imagine for completing their creations. Be sure to label each one with the child's name lest you forget which monster is which!

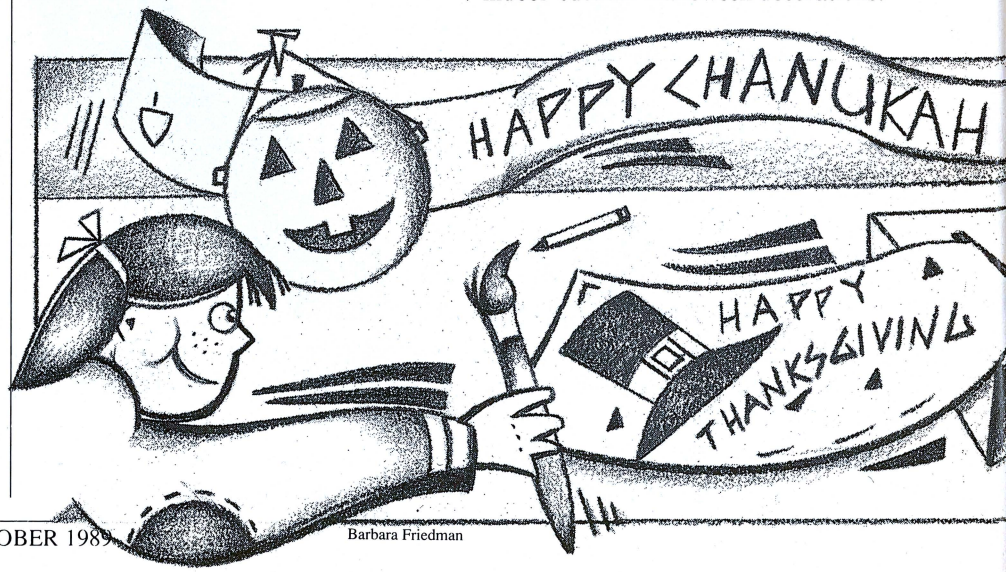
Activity: Using *Monstrous Monsters* in *SuperPrint* sign size (or an alternative graphics program), children can create thousands of unusual masks to print out, decorate, attach with rubber bands or string, and wear for trick-or-treating. (Young children may not enjoy the feeling of a mask on their face and prefer to use a hold-up mask with dowels instead.) It is a good idea to cut out eye "peep-holes" before the children decorate the masks.

Activity: Use *Monsters and Make-Believe* with *Talking Monsters* for children to create their own magical creepy creatures, and then type "trick or treat" to be spoken by the monster they have created. Reward each creator with a treat.

If you do not have the software to create talking monsters, type in the simple BASIC program below, and have children come to the keyboard one at a time to type in their names. Have your black and orange bags ready and filled with treats.

```
10 PRINT "WHO WANTS TO TRICK
OR TREAT"?
20 INPUT A$
30 PRINT "COUNT THE LETTERS IN
YOUR NAME. PRESS THE NUMBER."
40 INPUT B$
50 IF B$ = "3" THEN 12
60 IF B$ = "4" THEN 13
70 IF B$ = "5" THEN 12
80 IF B$ = "6" THEN 13
90 IF B$ = "7" THEN 12
100 IF B$ = "8" THEN 13
110 REM NO NAMES OVER 8 LETTERS
120 PRINT "PICK FROM THE ORANGE
BAG"
130 PRINT "PICK FROM THE BLACK
BAG"
140 PRINT "TO PLAY AGAIN TYPE
RUN"
```

Take-Home Activity: In addition to taking home their monster portraits and hanging them in a window on Halloween night, children can create take-home jack-o'-lanterns. Boot up *Bulletin Board Maker* and let each child choose and print out a large pumpkin from "Clip Art 1." (Similar, if somewhat smaller, pumpkin designs are available from *Print Shop* and other graphic program clip-art collections.) Let the children paste these pumpkins on construction paper. Help them cut out the form and cut out eyes and mouth in the jack-o'-lantern pattern. Children can then draw and color a Halloween scene on the back of the pumpkin. Turn on a light in the room so that the light shines through the jack-o'-lantern's eyes and mouth. The children can then take home their two-sided, indoor-outdoor Halloween decorations!



Barbara Friedman

THE THANKSGIVING HOLIDAY CENTER

With these activities, students will celebrate Thanksgiving in art and text with a high tech twist!

Materials Needed: For this part of the lesson, you'll need *Bulletin Board Maker, Story Starters: Social Studies,* and/or a basic graphics program like *Print Shop, PrintMaster Plus,* or *SuperPrint.* You'll also need fall colored construction paper, paste, scissors, and access to laminating machine.

Warm-Up Activity: If you have *Bulletin Board Maker,* call up and print out the "Turkey Parade" poster. This poster shows a giant-sized turkey parade balloon being held by a group of young children, and your students will have lots of fun coloring it in to hang in the classroom. If you don't have *Bulletin Board Maker,* help your students piece together a "Thanksgiving Sampler" bulletin board using another printing program's posters and banners.

Activity: After telling your students the story of Thanksgiving, let them tell it back to you in the form of an original text-and-graphics placemat. With *Story Starters: Social Studies,* children can create small comic strip frames or large one-frame comics. To create a scene related to Thanksgiving, the child first chooses a "Colonial" background, then builds a scene from the "Prop Shop" choices on the Clip Art disk. The graphics can be positioned with arrows and flipping techniques. Older children will want to add speech bubbles to the scene. The program also provides boxes and rectangles to help children who want to label the graphics that they used.

If you don't have the *Story Starters* program, your students can use a basic printing program with clip art and text to create similar words-and-graphics retelling of the Thanksgiving story.

When his or her story is finished and printed out, give each child a fall colored piece of construction paper to paste the scenes or scene on a background. If time permits, cut out fall leaves to paste flat on the page at the edges of the story. Last, laminate each child's finished placemat. Have the whole class watch and listen as each student tells the story that he or she has created with the graphics.

Take-Home Activity: Encourage the children to take their placemats home to share their Thanksgiving story with the family. Suggest that they use their placemats at the Thanksgiving meal so that they can contribute to the dinner table conversation with a meaningful understanding of the celebration feast.

THE GIFT-GIVING HOLIDAY CENTER

In this part of the lesson plan, students use the computer to create gifts to exchange while celebrating Christmas or Chanukah.

Materials Needed: You'll need either *Toy Shop* or a basic graphics/printing package, crayons or colored markers, and tape or glue. For the "Holiday Wishbook" activity, you'll need access to laminating machine and binding materials such as brads or string.

Warm-Up Activity: Check *Bulletin Board Maker* for two posters, "Santa's Helpers" and "Jack Frost," that are appropriate for December holidays. Other holiday posters can be created with *SuperPrint, Print Shop,* or *PrintMaster Plus.* Have children help you select these decorative graphics and color them in to post around the room.

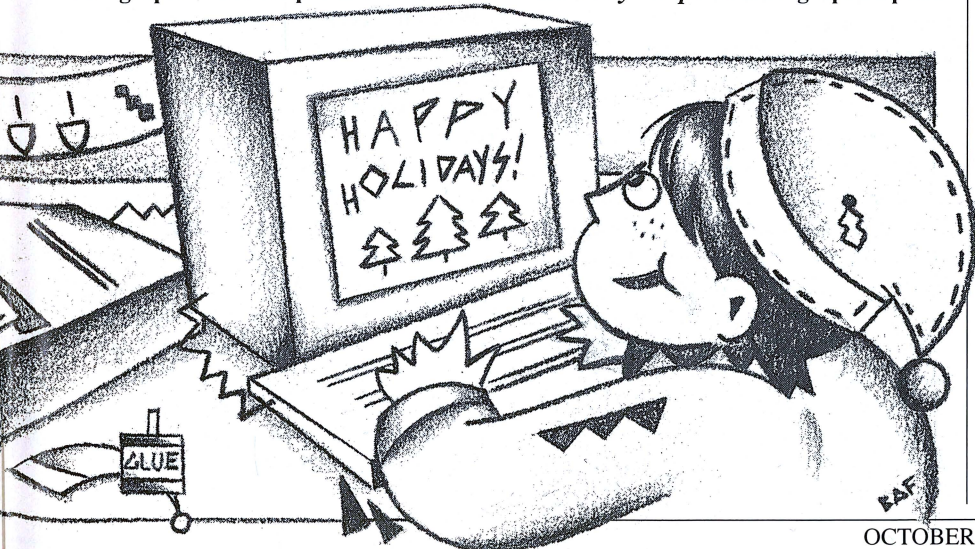
Activity: Holidays in December usually call for gift-giving. What gift could be finer than one that is made by the child using a computer?

Toy Shop allows students to create a total of 20 model toys that really work. The toys can be personalized by adding custom patterns and graphics and text. The precision parts are printed and mounted on adhesive card-stock included in the package, ready to cut out and assemble.

Students of a more literary bent can create "Holiday Wishbooks" using *Print Shop, SuperPrint,* or *PrintMaster Plus.* Help each student select appropriate borders, graphics, and text to communicate his or her three most fond wishes for family, friends, or the world this holiday season. Students should then create separate pages for a front and back cover design, print them all out, and color them in. Help students laminate and bind their books for giving.

As a class, your students can create holiday wrapping paper with small repeating graphics from any popular print program. Have students color in these sheets and exchange them to wrap presents with.

Take-Home Activity: If the toys or storybooks are not used for classroom gift exchange, help each child wrap his or her creation to take home for a parent, brother, sister, or friend. The children will agree that the best holiday gifts come from the hands and the heart—and the computer!



Trisha Ainsa is director of the Computer Literacy in Children/Title VII Program, Region XIX Education Service Center, El Paso, Texas, and an associate professor at the University of Texas at El Paso.

SOFTWARE SHOWCASE

REVIEWED THIS ISSUE:

LITTLE SHOPPERS KIT

CREATIVE WRITING SERIES PLUS

APPLEWORKS 3.0

MATH CASTLE

Added Attractions

by Therese Mageau

FABULOUS FREEBIES

Some social historians refer to this time in human history as the Information Age. Information is the "tool" of our civilization, and like anything else of value, it doesn't come cheap.

Ah, but sometimes it does come free! Below is a sampling of newsletters about educational technology available free to educators. Some are put out by software producers, so they'll obviously have a product-slant, but they're still worth taking a look-see. In most of these publications, you can pick up lesson ideas, find out about the "hot" topics in the field, and peruse columns by fellow educators. It's all yours—merely for the asking.

THE CREATIVE CLASSROOM
Published by Broderbund Software
Lists company news (awards, new product releases, pricing information). Also gives lesson ideas for using Broderbund software. Quarterly.
Broderbund Software
San Rafael, CA 94903-2101
800/527-6263

ED TECH NEWS
Published by the Office of Educational Technology
Florida Department of Education
Provides information about what's happening with educational technology in Florida. Despite its regional affiliation, Ed Tech News articles would be of interest to anyone involved in educational technology. Five times yearly.
Office of Educational Technology
Florida Department of Education
Knott Bldg.
Tallahassee, FL 32399
904/488-0980

SOLUTIONS
Published by Sunburst Communications
Each issue devoted to a different topic of interest to computer-using educators. Fall '89 issue looks at the changing role of the teacher. Provides lesson ideas using Sunburst software. Company news. Quarterly.
Sunburst Communications
39 Washington Ave.
Pleasantville, NY 10570
800/431-1934

USING WHOLE LANGUAGE SOFTWARE
Published by Willy Billy's Workshop
Provides a forum for discussing software of major publishers that are compatible with the principles of whole language. Offers ideas for using off-the-shelf software to enhance reading and writing in all subject areas. Quarterly.
Willy Billy's Workshop
P.O. Box 6104
Cleveland, OH 44101
216/463-1000

LITTLE SHOPPERS KIT

Grade Level: *K-4*
Subject Area: *Math - Money*
Computers: *Apple II family*
Memory Requirements: *64K*

Little Shoppers Kit is a unique program that creates a complete environment in which children can learn about money, banking, change, and shopping. In addition to the program disk, teacher's guide, and student activity book, the package also contains all the ingredients to make a store "go"—play food, play money in a bank box, mesh bags to hold the food...even miniature grocery bags!

Little Shoppers Kit enables the computer to act as facilitator by taking teachers and students through an easy, step-by-step process for implementing the program in the classroom, from setting up the store in the morning to closing down for the night. It also helps students through what for many—particularly young ones—is most difficult about money math: the actual computation. The program frees children to focus on process and not be bogged down with details. A philosophy of classroom integration is highlighted throughout the guide and activities. Since all the early grades do units on money, this seems like a perfect way to teach it!

When the program opens, a checklist appears to help teachers designate the various roles and jobs: stocking shelves, taking inventory, getting money for the cash box, and so on. Care is taken to include lots of children in the different processes—the guide even gives suggestions about what type of child might work and learn best in what jobs.

Students are then given an option of using a "pre-set" store, editing an existing store, or creating a new one. The pre-set stores include:

•THE SUPERMARKET, using all money denominations;

•DIME TIME, using only tens and ones;

•DOLLAR STORE, using only full dollars and no cents.

Once students have chosen their store, they enter their "shopping list." In the pre-set stores, each item is listed with a single letter code (for example, A stands for Applesauce). By simply pressing an A, the screen shows the full name of the item and its value.

When the entire shopping list has been entered, the computer tells the cashier the total amount purchased and what the change should be. Cashiers must decide how they will hand back that change, using the types of money available to them within the store's parameters. Presumably, children would also use the play money. If they have entered a correct combination of bills and coins, the word CORRECT shows on the screen several times, and the game goes on to the next customer.

Creating a completely new store involves setting up new jobs, new codes, new prices, and so on. There are also several other game options which teachers could find very helpful, depending on their students' skill levels:

•TIMER ADJUSTMENT controls how much time students can spend on one grocery outing.

•CHANGE MAKER tells students how much change is required, and can be turned on or off.

•PRINTER OPTION allows you to print out receipts for each transaction as well as a tally of items sold at the end of each "shift."

•SALES TAX OPTION gives more experienced students practice in using percentages and decimals in a "real-life" way. Tax levels can be adjusted to a one or two digit amount.

•COUPON OPTION allows students to come in with up to three coupons, and the computer does the rest. I had fun with this one!

The documentation for this program is superb. The teacher's guide is often written in the first person so that teachers have a feel for what the authors have tried with kids and what really works. Each section is laid out in an accessible format and all processes are "walked through" in a simple way. It describes how to assign tasks, how to set up in an ideal location for the store, how to get started, and even how to go about "cleaning up." In addition, both the teacher's guide and the activity book are chock full of classroom ideas. There are even two store "posters" included at the end of the activity book.

Little people get to be "Little Shoppers" with all the accoutrements they'll need: food, money, cash box, shopping bags, and a software program that helps them practice and understand money basics.

As I would expect from a Tom Snyder Productions product, the program disk works like a charm. Many keystrokes are single, making it easy for young children. I would have liked a few more opportunities to escape. The ESC key was used to indicate DONE, not leaving me the option to get out if I wanted or needed to.

I also would have liked to have seen a little more graphic feedback other than the flashing CORRECT signal when students complete the "Giving Change" section. I assume the understated style was chosen so that the program won't be confused with a drill and practice package, but a little more recognition for the student might be nice. Also, if the wrong answer is given, the program simply flips back to the shopping list screen. I was a bit confused by that.

Little Shoppers Kit is extremely appropriate for all lower elementary grades. The program grabs children's interest because it is something they know about—what child has not experienced going to the grocery store? The miniature groceries, "funny" money, and shopping bags certainly add to the sense of play and to the excitement! As an elementary teacher, I would have loved to have taught money this way!

Tom Snyder Productions, 90 Sherman St., Cambridge, MA 02140; 800/342-0236; $109.95; available in 5.25- and 3.5-inch formats; back-up included; 30-day preview.

Evelyn Woldman, *software specialist, Chapter I Computer Center, Walsh Middle School, Framingham, Mass.*

(Circle 112 on Product Info. Card.)

(Continued)

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You Are There! One way students can explore American history with* Story Starters: Social Studies *is by using pictures from the program's graphics library, such as this one of the Lewis and Clark expedition, to illustrate their stories or essays.

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Teachers with limited resources would probably enjoy having one of these programs in their collection. Larger systems might find owning the complete collection of benefit. Those teachers who are using elements of the whole language approach will find the big book feature of the word processor to be invaluable.

Teachers who have older editions of *Monsters* or *Dinosaurs* can contact Learning Lab and obtain the newer editions for $10 a package.

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You Are There!* One way students can explore American history with Story Starters: Social Studies *is by using pictures from the program's graphics library, such as this one of the Lewis and Clark expedition, to illustrate their stories or essays.

CREATIVE WRITING SERIES PLUS

Grade Level: *K-8*
Subject Area: *Language Arts – Science – Social Studies*
Computers: *Apple II family*
Memory Requirements: *128K*
Optional Hardware: *Printer, speech synthesizer, 3.5-inch disk drive, mouse*

In a typical classroom, you'll find students writing stories, drawing pictures, putting up bulletin boards, developing projects, exploring a particular subject area, or using a computer. Imagine a tool that would integrate all these activities into one creative learning environment: The Pelican Software*Creative Writing Series Plus* from Learning Lab does just that, using four appealing software packages. *Monsters and Make-Believe PLUS*, *Dinosaur Days PLUS*, *Story Starters: Science*, and *Story Starters: Social Studies* are similarly formatted programs that function as both creativity and word processing tools.

The *PLUS* in *Monsters and Make-Believe* and *Dinosaur Days* denotes a host of new features, including an optional speech component, which make the packages even more versatile than before. Both *Story Starters* programs are new to the creative writing series. They follow the same format as *Monsters* and *Dinosaurs*, but focus on a curricular theme.

Students who are using *Story Starters: Social Studies*, for instance, can explore facets of American history by creating a whole story-telling environment. From a graphics library they can choose backgrounds, pictures of famous people such as Sojourner Truth, modes of transportation, animals, plants, buildings, and "props" such as flags and household items, to create a scene for use in a story, for a bulletin board, or for another project. After completion, these pictures can be saved and printed in standard, tall, short, skinny, book, or big book (double width) sizes. Pictures can also be printed in outline mode so that students can color them.

One interesting feature of the "art" part of these programs is the availability of "speech bubbles" to create a comic strip-like effect. This enables students to give their characters direct verbal roles in the scene.

After creating a picture, the student can write accompanying stories using one of several fonts including "fancy" and "early American." (In the *Science* program, a computer-like font called "future" is one of the choices; in *Dinosaurs* students can choose "rock" printing.) The stories can then be printed in the same formats as the pictures. With the use of an optional speech synthesizer, these stories can "talk" (as can the bubbles from the pictures and the data base information cards).

All the Pelican creative writing programs are reasonably easy to use and include understandable documentation for the teacher. The student documentation is clearly written, but is unfortunately presented in a condensed format that is not easily usable by its intended audience. If possible, "For Kids Only" should be included as a separate, readable, reproducible booklet for students.

One wonderful aspect of the *Science* and *Social Studies* packages is the Teacher's Activity Guide at the end of each program's documention. The guides are thoughtfully prepared and will provide teachers with endless ideas for classroom excitement and productivity. Ideas are given for creating dioramas, mobiles, newspapers, puppets, and other projects. A Learning Lab spokesperson said a school edition of *Monsters* will be available in November.

Teachers with limited resources would probably enjoy having one of these programs in their collection. Larger systems might find owning the complete collection of benefit. Those teachers who are using elements of the whole language approach will find the big book feature of the word processor to be invaluable.

Teachers who have older editions of *Monsters* or *Dinosaurs* can contact Learning Lab and obtain the newer editions for $10 a package.

Learning Lab Software Publishing Inc., 21000 Nordhoff St., Chatsworth, CA 91311; 818/341-9611; *Monsters and Make-Believe PLUS* and *Dinosaur Days PLUS* sell for $59.95; *Story Starters: Social Studies* and *Story Starters: Science* are available for $49.95; back-up included; 30-day preview.

Beth Lazerick, *secular studies principal, Hebrew Day Institute, Rockville, Md.*
(Circle 113 on Product Info. Card.)

APPLEWORKS 3.0

Grade Level: *4 and up*
Subject Area: *Word processing, data base, spreadsheet utilities*
Computers: *Apple II family*
Memory Requirements: *128K*

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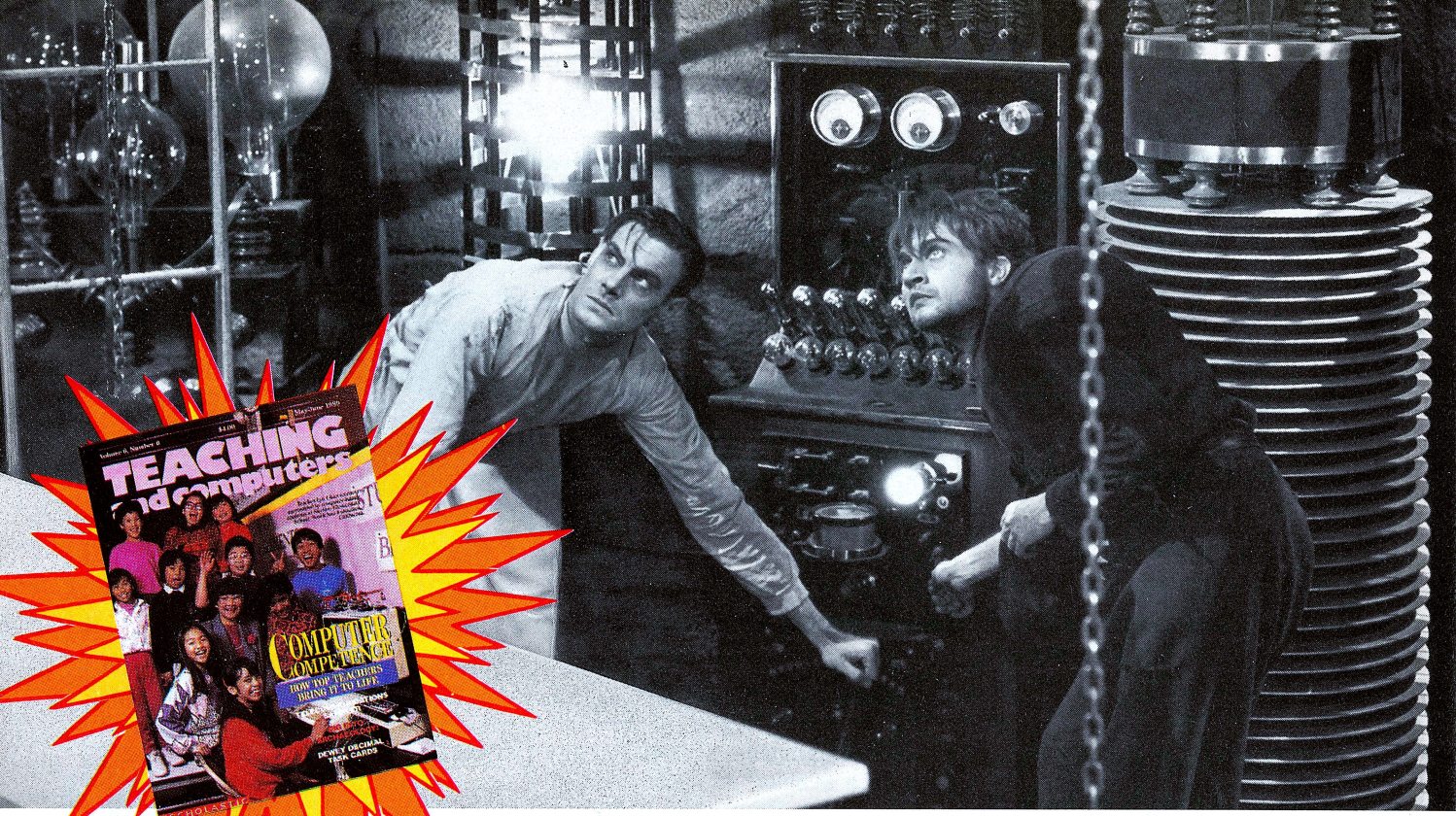

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Works. Maybe the right adjectives are good, better, best!

The first versions of *AppleWorks* were good. *AppleWorks* made it possible to write letters and reports, to collect and organize data, and to calculate and interpret figures, all in one easy-to-use program.

AppleWorks 2.0 was even better. Now it was possible to merge names and addresses from a data base into letters produced with the word processor.

But *AppleWorks 3.0* is the best. Each of the three modules—word processor, data base, and spreadsheet—has improved significantly. Let's look at some of the specific changes.

THE WORD PROCESSOR

The spell checker is the most noteworthy addition to the word processor. *AppleWorks 3.0* includes a 90,000 word dictionary and the option of adding custom dictionaries. A simple OPEN-APPLE V command brings the checker to the screen, allowing users to quickly verify one word, a block of words, or all of the document's words. The program displays a summary of words that are misspelled and shows the corrections that have been made, which is particularly helpful for students who might want to review troublesome words. The spell checker even catches double-typed words. The word count feature is very helpful for those users needing an accurate count of a document.

One of the best program improvements is the new tab system. *AppleWorks* users have previously not been able to justify money amounts or do column work very easily. The *3.0* version allows users to have left and right justified tabs, decimal tabs, and centered tabs. Tab rulers can be changed from paragraph to paragraph, allowing greater versatility in formatting a document.

Claris has also greatly expanded the capabilities of the control key. Now it is no longer necessary to go to the printer options to center the text or titles, justify the right and/or left margins, print in bold, or underline.

THE DATA BASE

Have you ever wished that you didn't have to press OPEN-APPLE L to see all the horizontal categories in the data base? In *AppleWorks 3.0*, the tab key takes you across the file, permitting an easy scan of the complete record. OPEN-APPLE LEFT ARROW or RIGHT ARROW will take you to the left or right of the screen. Here's my favorite scan feature: suppose you want to look at a student's name, which is on the far left of the document, and his or her attendance record, which is on the far right of the document. *AppleWorks 3.0* allows you to freeze the student's name on the screen and then scroll over to the other end of the document. How easy it is now to compare two different categories!

Users can also arrange files by more than one category. For example, suppose that there are ten people named Smith in your file. You can arrange their records by last name and then also by their birthdays. The possibilities for organizing your files are endless.

In previous versions of *AppleWorks*, it was possible to have only eight different reports for the printer. Now users can choose from 20 different report formats, as well as store 800 records on a 128K machine. With expanded memory the number of stored records can be as high as 16,000.

In the layout option, category titles can be shown in inverse type, making a single record layout easier to read.

THE SPREADSHEET

Additional spreadsheet functions will enhance the use of the program in mathematics classes. Five new arithmetic, nine trigonometric, six financial, and six logical functions have been added.

Printing a spreadsheet is much easier with *AppleWorks 3.0*. The program automatically divides the spreadsheet into manageable units. *AppleWorks* prints the columns that will fit on one page, and then prints the next series of columns on another page.

Now it is no longer necessary to repeatedly answer "no change" or "rela-

(Continued)

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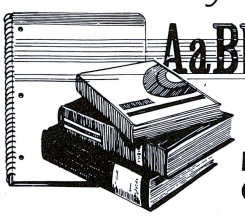

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tive" when copying a formula. OPEN-APPLE N will signal "no change" and OPEN-APPLE R will indicate that the formula is to remain "relative."

The improved copy and move commands are perhaps the spreadsheet's best features. Users can now copy or move blocks or columns of cells between spreadsheets; previously, only rows could be moved. The transfer of data from one spreadsheet to another can now be done far more efficiently.

As with any new product, there are some disadvantages. *AppleWorks 3.0* will read files from any version of *AppleWorks*. However, if a file is created with *AppleWorks 3.0*, it cannot be used with older versions of *AppleWorks*. But once you immerse yourself in the capabilties of 3.0, you'll probably wonder how you ever used earlier versions.

If you have a registered version of *AppleWorks* and have not received the necessary upgrade forms, you can call Claris to request them. (Information about the upgrade can also be found in Claris's quarterly newsletter, *Technical Solutions*.) To upgrade, you'll need to submit your old *AppleWorks* disk and a check for $79.

The program comes on four 5.25" disks or one 3.5" disk. The 5.25" disks require some swapping, but the new features make up for this inconvenience. The package also contains a Quick Reference Manual and Quick Reference Card.

AppleWorks 3.0 is indeed new and improved. Claris has proved that it was out there and listening to its customers. If you're an old-time *AppleWorks* user, you'll be thrilled with all the additions and changes. If you're new to *AppleWorks*, you're in for a real treat.

Claris Corp., 5201 Patrick Henry Dr., Box 58168, Santa Clara, CA 95052-8168; 800/544-8554 for upgrade orders or 408/727-8227 for new orders; up-grade $79; new order $249; copyable disks; 30-day preview.

***Dorothy J. Cordes**, eighth-grade teacher, Girard Community Unit #3, Girard, Ill. (Circle 114 on Product Info. Card.)*

Math Castle

Grade Level: *1-4*
Subject Area: *Math*
Computers: *MS-DOS*
Memory Requirements: *256K*
Additional Hardware Requirements: *Graphics card required for IBM*

As defenders of their castle against a host of alien spaceships, students turn to the armory only to find ... the royal arsenal is powerless against these invaders! Students' only weapon is their wits. Can they answer math problems quickly and accurately to repel the alien drones?

Envision's *Math Castle* is an appealing program for teachers looking for a back-to-basics math drill and for students looking for a little excitement in their learning. The program is appropriate for primary students who understand the basic foundations and functions in addition, subtraction, multiplication, and/or division.

The scene is a medieval castle. Students rule the castle and protect it from alien spacecraft by correctly answering math problems presented at the bottom of their screen. Each correct answer adds energy to the Energy Shield (the only thing separating students from the aliens) and points to a game score. An incorrect answer will result in a loss of energy. The correct answer will then appear on screen and the problem will immediately reoccur, giving students a chance to try again.

The program's only record-keeping is a "Hall of Fame," reserved for the ten highest scorers. More comprehensive record-keeping would be helpful to teachers for evaluating their students' strengths and weaknesses. The program does show students the problems they missed, but it would be better if this screen could be printed out for students to take to their seats and review. A special "Weapons Training Center" does allow students to

practice the problems they missed after a game, as well as to use as a warm-up game for speed and accuracy before they play.

Several change options give both teachers and students some flexibility in how the program can be played. There are 40 levels of problems, each one more difficult than the next, that can be preset. (An appendix at the back of the manual lists all the problems.) Problems can be presented in a horizontal or vertical format. The change options can be set to make the "Weapons Training Center" an optional or mandatory review. If students need more time to solve problems, they can add up to four seconds (although they'll lose a few bonus points as a consequence).

In addition, *Math Castle* lets teachers and students enter their own math problems. The program can store up to 12 sets of problems; each set can contain up to 76 problems. The option's format is limited, however, to five digits per problem (such as 55 + 111, but not 555 + 111) with answers no higher than 9,999. The user's manual suggests that students use this option to enter their homework problems—that would certainly take the drudgery out of creating and filling in take-home worksheets!

Math Castle's documentation is clear and user-friendly, although it offers no educational suggestions or extension activities. As of presstime, there was no school edition of the program, but an Envision spokesperson said that a lab pack version for schools (which will include classroom suggestions) should be available in October.

Using *Math Castle* is quite easy. A teacher or parent who is familiar with MS-DOS computers can load the program and get the student started with little fuss. After initial instructions, students should be able to use the program alone. The publisher lists the program for ages 4 and up. Since players need to have a basic understanding of math functions, I would evaluate the program as appropriate for grades 1-4, with the user-problem options allowing it to be used by students in higher grades.

Envision Software, 720 S. 33rd St., Suite 203, Federal Way, WA 98003; 800/468-6555; $39.95; no back-up; 30-day preview.

Trisha Ainsa, *associate professor, Early Childhood Studies, University of Texas, El Paso, Texas.*

(Circle 115 on Product Info. Card.)

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— Ardyce Erlich

Co-Founder of Pegasus Project

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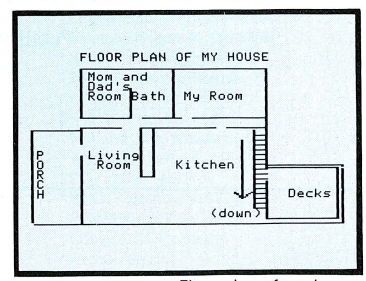

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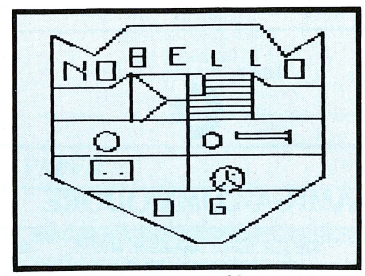

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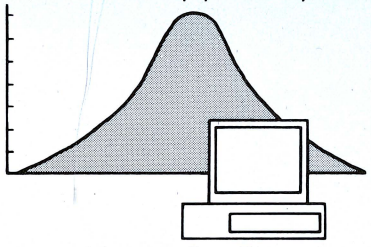

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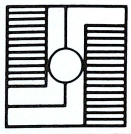

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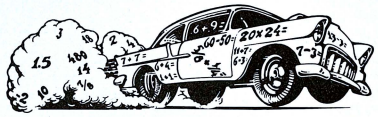

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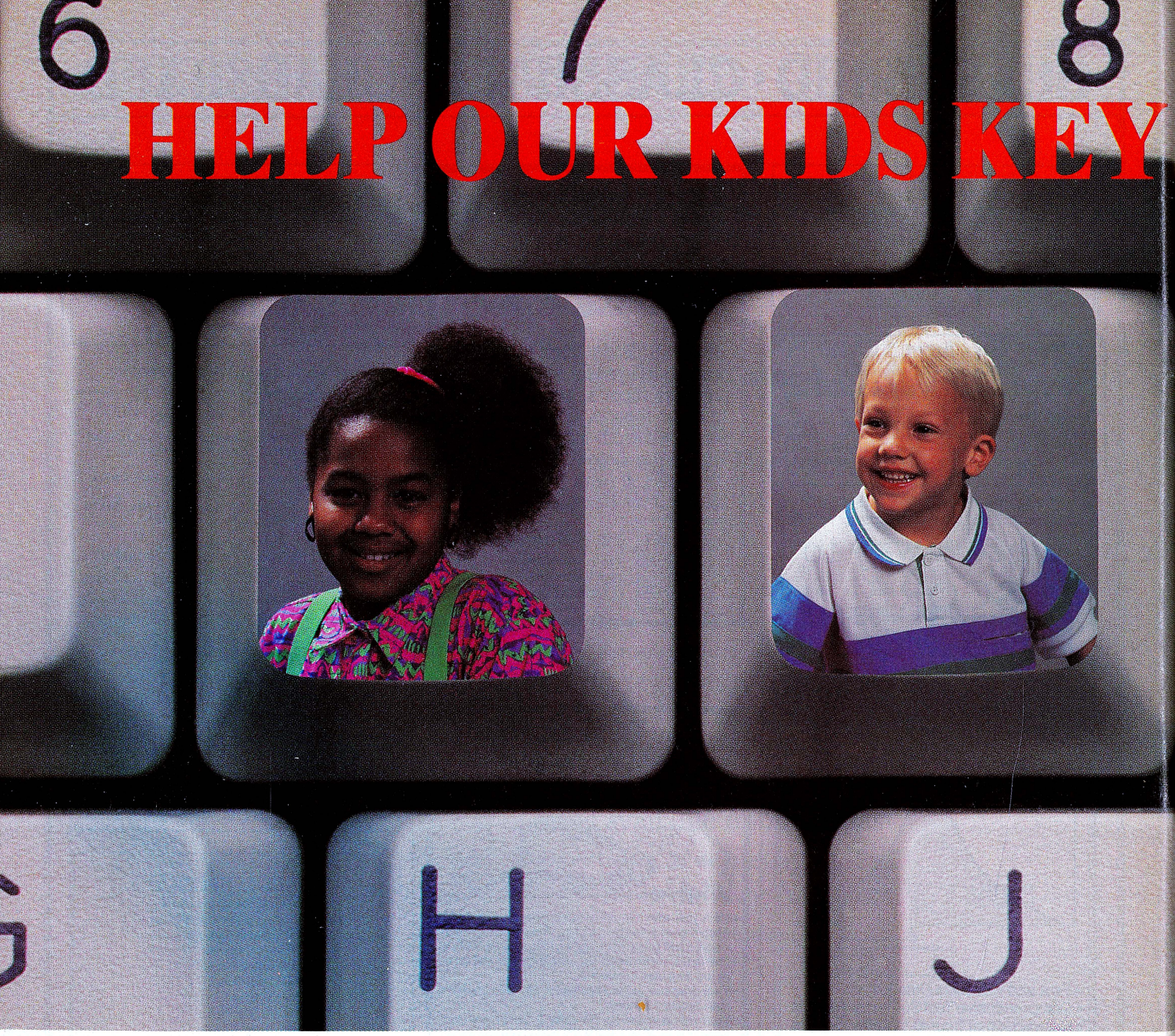

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